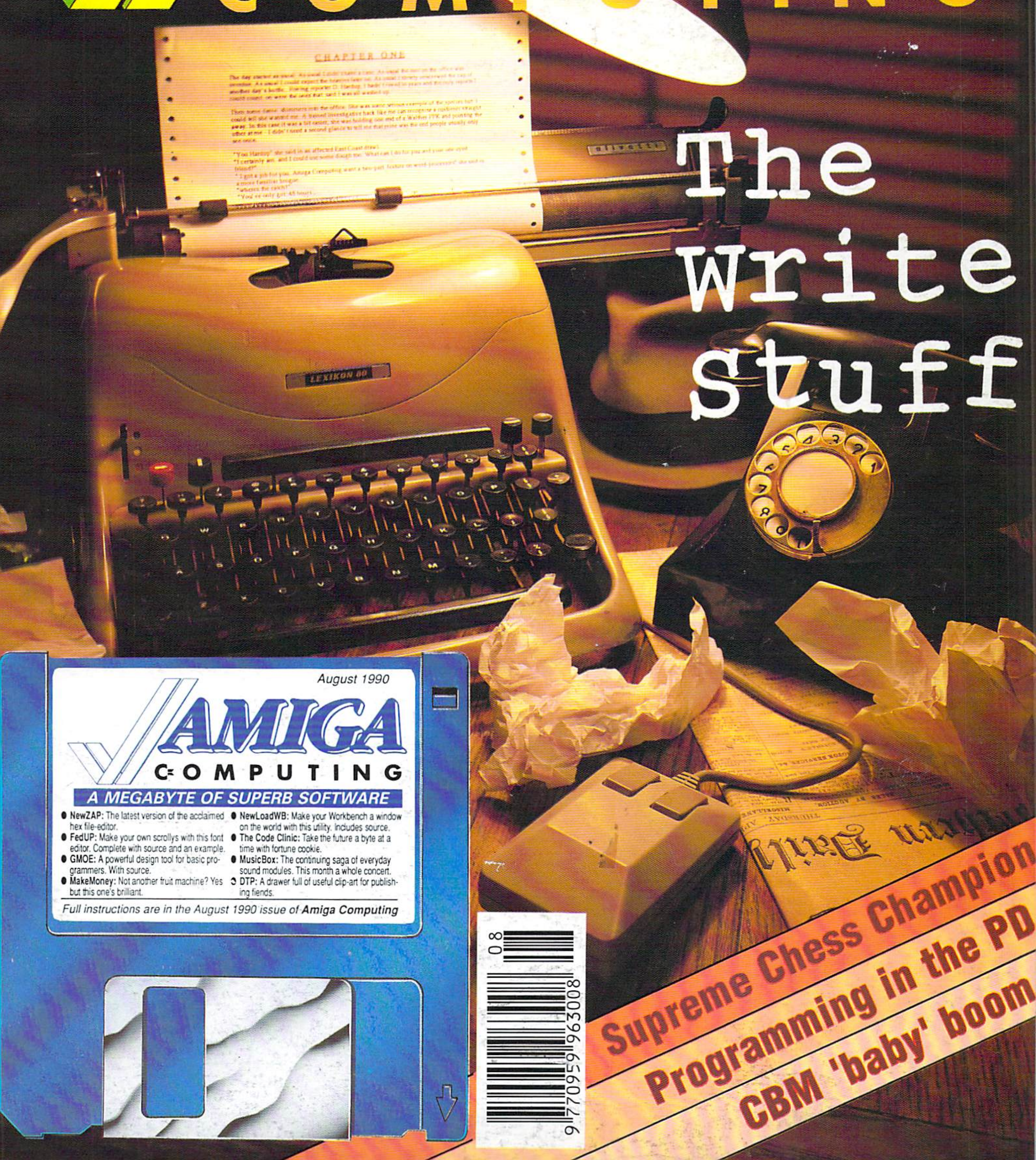
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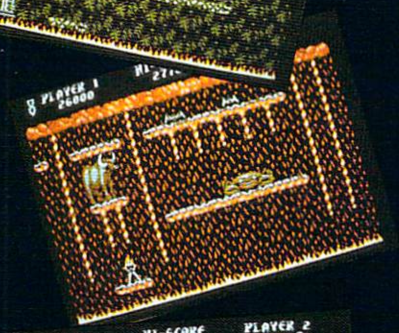
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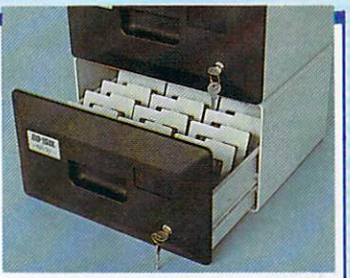
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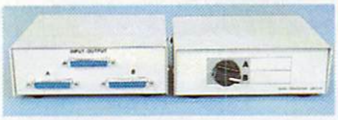
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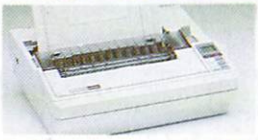
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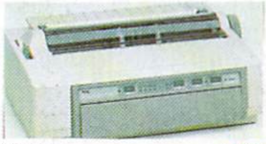
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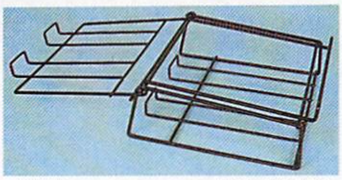
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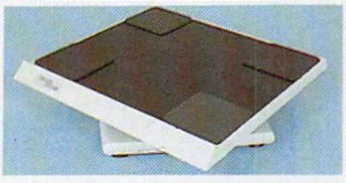
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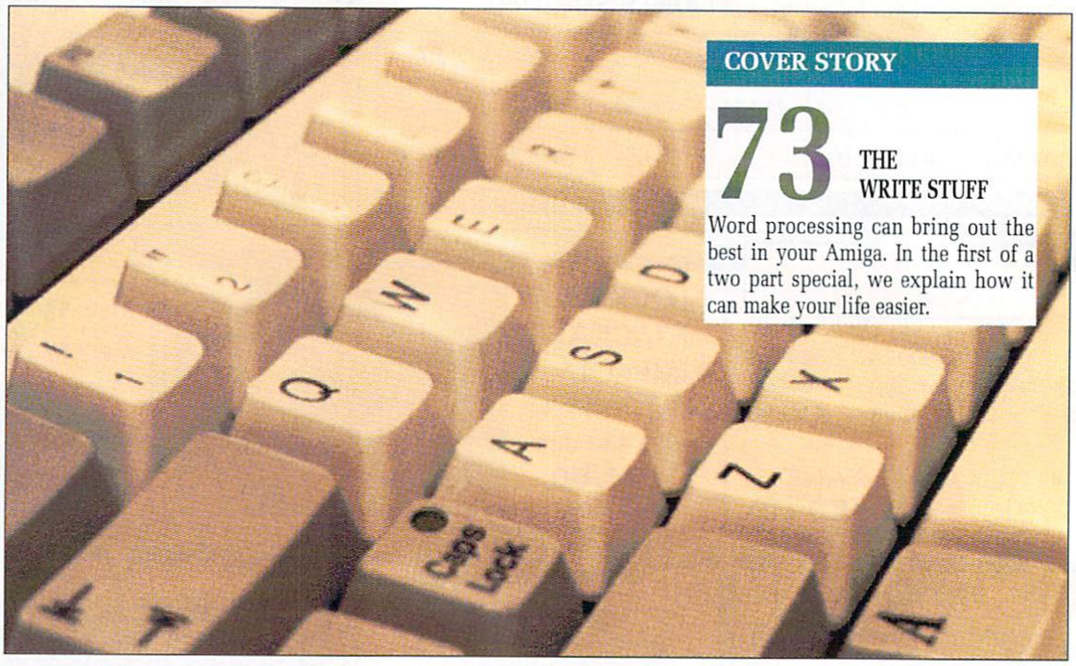
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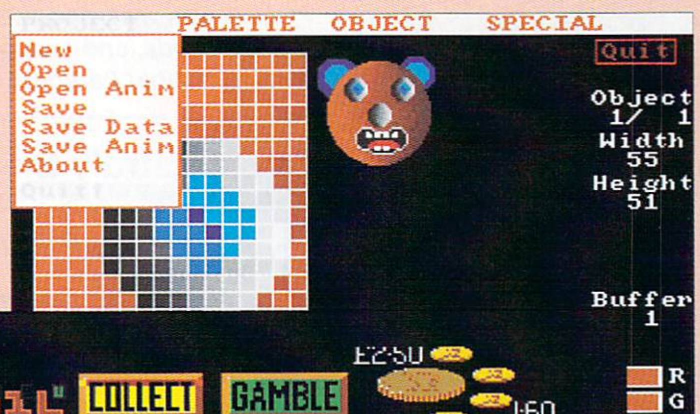
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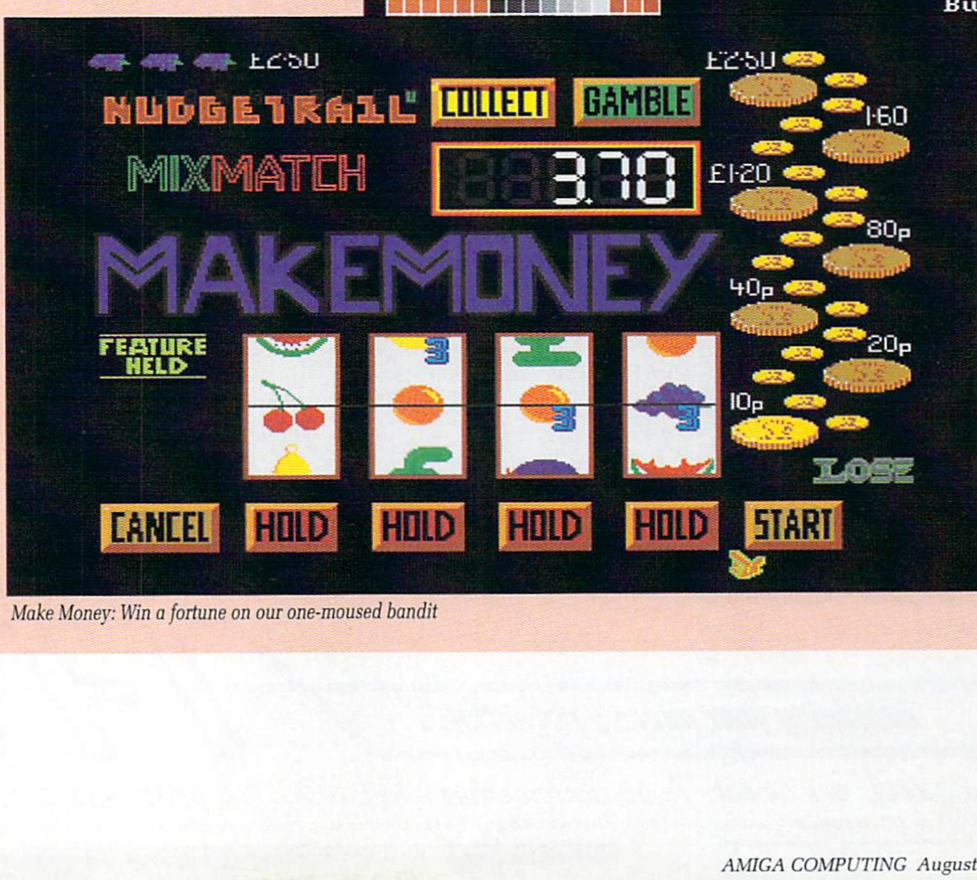
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- 300 page manual with full index.
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Protext was awarded the "Best Buy" accolade in *PC Buyers Guide*, and was given a bottom line verdict of 5 stars in *What Personal Computer?*

"Protext is probably the most powerful word processor on the Atari ST" ST USER 4/88

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"Protext deserves to be the system by which all other word processors are judged ... Arnor has given the market a superb product" YOUR COMPUTER

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Protext ... truly the professional's choice

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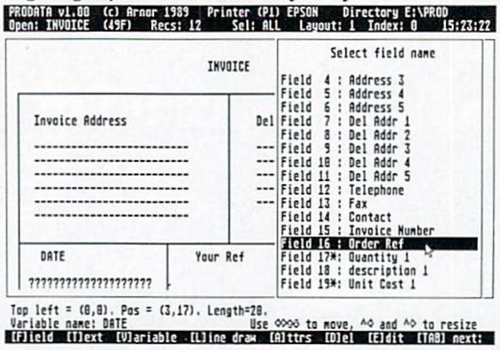
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And of course, Prodata is fully compatible with Protext.

Amiga owners please note that you need 1MB to run Prodata - see below for special price for Prodata plus A501 (512K memory + clock expansion)

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Commodore launches CD multimedia revolution

HERALDING the start of the next computing generation, multimedia became a reality for the home user when Commodore finally unveiled its long-awaited CD Amiga at the giant Consumer Electronics Show in Chicago.

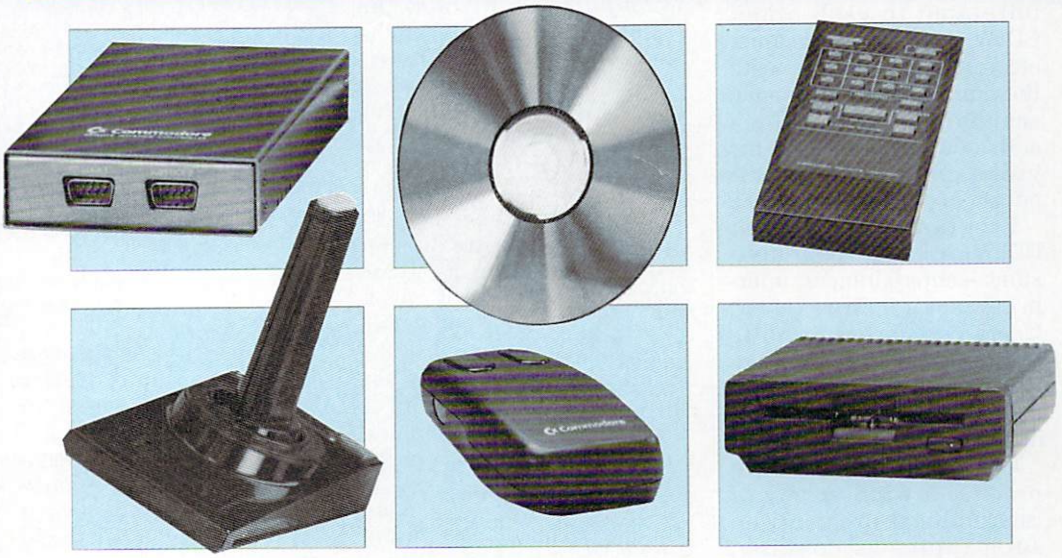
Codenamed "The Baby", this offspring of the new computer generation was born to a welter of media and trade interest and should be available in the UK by September.

CDTV (Commodore Dynamic Total Vision) brings advanced interactive multimedia performance in a package which is claimed to be as simple to use as changing television channels with a remote control.

Connecting directly to a television set or monitor and a home stereo unit it becomes an interactive entertainment, information and education centre.

It consists of a sleek, black player which is similar in appearance and use to a conventional CD audio player. At its heart is a Motorola 68000, 16/32 bit central processing unit and CDTV has 1Mb of ram while utilizing proprietary Commodore graphics and audio processors.

The player is operated with a 10-key infra red remote control and also has infra red and peripheral ports with which it can be connected to optional key-

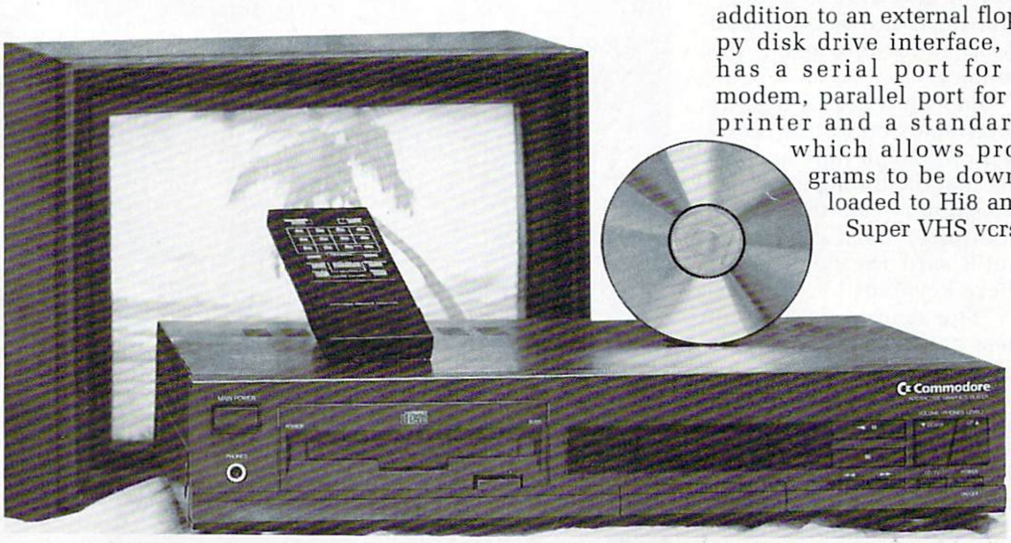


board, joystick mouse or trackball. Other peripherals include a 3.5in floppy disk drive, printer and a video genlocking card which allows users to mix computer graphics with live video.

A smart card port in the front panel of the CDTV allows users to save and store up to 64Kb of data. Games in progress, personal finance projects and other activites can be saved on the smart card and the player can be turned off without loss. The applications can be resumed simply by re-inserting the card and continuing the program. CDTV will also play conventional audio compact discs.

In audio mode, it is fully programmable and features eight-times oversampling and dual 16 bit D/A converters. A front panel 24 hour clock, stereo headphone jack and full-function fluorescent display provide time, track and volume information.

The rear panel allows users to configure the CDTV player for specific applications. It is compatible with any television or RGB monitor and accepts both NTSC or PAL RCA connectors. In addition to an external floppy disk drive interface, it has a serial port for a modem, parallel port for a printer and a standard which allows programs to be downloaded to Hi8 and Super VHS vcrs.



Compact discs have the capacity to store more than 550Mb of digital data – the equivalent of 250,000 pages of text. It is this capacity which allows program developers to design applications which are significantly more sophisticated, challenging and exciting than those available on any existing computer or home entertainment format.

Because of their read-only-memory, they cannot be illegally copied or pirated. Commodore plans to have 100 titles available for CDTV's autumn launch and 200 available for Christmas.

Sidestepping the operating complexity of a computer or the dexterity needed by a games machine, CDTV has initially been aimed at two consumer groups – the enthusiast who already has advanced audio, video and computer systems and educated adults who want to provide interactive education and entertainment for their families but don't want to learn how to work a conventional computer.

Launching "The Baby", the general manager of Commodore's new Interactive Consumer Products

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Division, Nolan Bushnell, said: "There is a tremendous, pent-up demand for a player with the capabilities of CDTV.

"Until now consumers have had to deal with separate audio, video and computer systems which were unrelated to each other. CDTV integrates consumer electroncis technology with the computer into a single, easy-to-use system which adds new dimensions to the video and audio experience".

Programs planned for CDTV fall into three divisions – entertainment, information and education. Users can access specific topics listed in reference works such as encyclopaedias, world atlases and almanacs.

Commodore is also to produce a wide variety of instructional programs on such topics as cooking, sports, and foreign languages plus special learning programs for children.

Music from rock to opera will be enhanced with video graphics and games will take on a new sophistication with the CDTV's sound and graphic capaibilities.

"We do not think of CDTV programs as software", added Nolan Bushnell. "Instead, the concept that drives CDTV is that of an electronic interactive, instantaneously accessible library. We will have fiction, non fiction, reference and entertainment titles that provide consumers with a truly unique source of information and entertainment.

"CDTV is the next logical step in the evolution of consumer electronics. It provides capabilities far beyond any currently available entertainment or computer system yet is remarkably simple to use. If you know how to change TV channels with a remote control, you can take full advantage of CDTV".

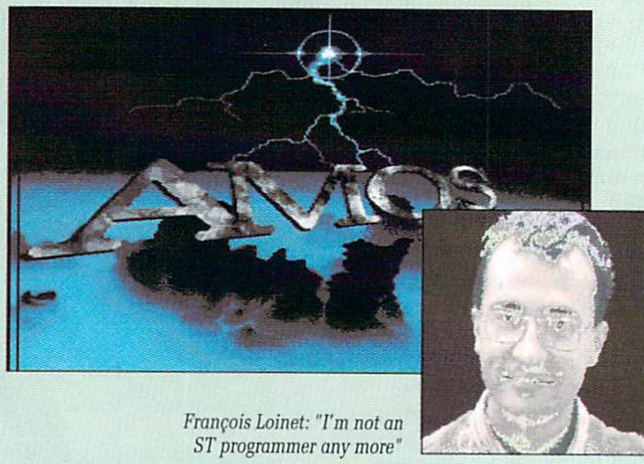
With CDTV tipped to sell at under $1000, the UK price is expected to be around £690. Discs in America will range from $30 to $100 – £18 to £60.

AMOS offers mega power

AMOS – The Creator is here. Billed as "the most eagerly awaited Amiga utility ever" and previewed in the May issue of *Amiga Computing*, AMOS is the latest thoroughbred from the stable of Mandarin Software (0625 859333), designed to put the reins of creative power into the hands of all Amiga owners.

"STOS was good but AMOS is ten times better", promises managing director of Mandarin Chris Payne. "It is becoming THE development language for the Amiga. AMOS stretches the Amiga to its limits. It has many more features and is much faster than STOS and really gets to grips with those custom chips.

"Over the past two months, we have been inundated with telephone requests from both dealers and end-users. It's going to be a massive hit".



François Loinet: "I'm not an ST programmer any more"

Included in the package are sprite editor, arcade games Magic Forest and Amosteroids, graphical adventure Castle AMOS, educational game Number Leap, a 300 page manual with more than 80 example programs on disc, sample tunes, sprite files, AMOS Club newsletter and registration card. Price, £49.99.

Only Amiga to go on sale at Boots

THE Amiga 500 will have a much stronger showing in the High Street from September. It will be the only machine to be stocked by the giant Boots chain which has just decided to move into hardware.

An agreement between Boots and Commodore will put the Amiga 500 into the sound and vision departments of more than 150 Boots stores throughout the country.

"Boots has been a leading retailer of computer software for some time and we felt that the timing was right for an entry into the leisure computer hardware market", said the company's Steve Reynolds.

"The Amiga 500 is the best computer of its class and this is reflected in our sales of Amiga software. It will be on the shelves from September in order to cater for the Christmas gift market which is traditionally the busiest time for purchases of this type".

Managing director of Commodore, Steve Franklin added: "The fact that the Amiga 500 will be the only computer stocked by Boots is a tremendous endorsement of the product. "I firmly believe that it is the most versatile computer of its type available. We have sold over two million worldwide which is confirmation of this".

Augmented A-Max on way

CURRENTLY nearing completion by Canadian developers Readysoft is an updated version of A-Max, the program which allows Amiga users to run Mac software. It should be available shortly from Entertainments Inter-

Supra releases a new drive

LEADING American Amiga add-on manufacturer Supra Corporation (0101 503 957 9075) has released a new SupraDrive floppy disk drive.

The SupraDrive uses 1Mb unformatted or 880k formatted disks and features low power drive mechanisms. An external on/off switch lets the user free up to 23K of ram when not using the drive and an indicator light makes it easy to monitor drive activity. The drive, which comes with an extra long cable costs $169.95.

Also new from America is DEB2000, the Denise extender board for Amiga 2000 and 2500 machines from MicroWay (0101 508 746 7341). DEB2000 allows MicroWay's graphic enhancer flickerFixer to be used in the Amiga without taking up the video slot, leaving it free for other devices such as internal genlocks and frame buffers.

DEB2000 transfers the video signals required by flickerFixer from the Denise socket on the Amiga motherboard to the DEB connector board. The flickerFixer is then position behind the existing XT slots and connected to the DEB2000 by a cable. DEB2000 costs $75.

national (0268 541126).

Main improvement will be the inclusion of the hard disc support which was lacking in the original A-Max. Users will be able to format a Mac partition on their Amiga hard discs when running A-Max. They will then be able to save Mac data to that partition.

Because of the difference of controllers on Amiga hard disks, there will be a series of driver software available with the upgrade. Users will be able to select the right one for use with their hard disk.

"The problem of varying controllers has been the main reason for the hold-up in hard disk support", said Tony Bond of Entertainments International. "Coding has also been enhanced to give better reliability and suitability".

No price has yet been fixed for the upgrade. It will have a stand alone price for new purchasers but existing users will be able to upgrade for a nominal charge.

Version 2 of A-Max is expected later in the year.

Hard disk card for the 500

VENTURE Systems (0483 727588) has come up with a low cost way to add a hard disc to the Amiga 500. It's the Ramdisk Card, an internal hard disk interface card which fits in place of the A501, 512k ram expansion.

The card adds an industry standard ST-506 MFM hard disk interface as well as 512K of ram and a battery backed real-time clock. It will support any single ST-506 MFM drive with up to eight heads allowing most drives up to 80Mb capacity to be added.

It comes with all the necessary software including low-level formatting and paritioning program, an auto-mounting driver, bad sector reallocations and disk drive head park.

"Although based on a four chip ram design, our card does not suffer from the refreshing problems inherent in other cards based on this technology", said Robert Harvey of Venture.

"The Amiga was designed to use 256Kx1 Drams and as such only produces the signals to refresh these chips correctly. 256Kx4 Drams are not compatible with this refresh system and unless special circuitry is included, as on our card, could suffer from memory loss. Almost all other ram/clock cards on the market do not include this circuitry".

The Ramdisk card costs £150.

Molecular challenge

PUPILS across the country are putting the pressure on their chemistry teachers in the hope of winning an Amiga for their school and £100 for themselves.

It's all part of a promotional stunt for Atomix, the latest computer game from Grandslam and Thalion (081-655 3494). The companies are offering the computer to the first chemistry teacher who can master the initial 20 levels of Atomix which challenges the user to construct complicated molecules from atoms. The £100 goes to the pupil who puts in the winning nomination.

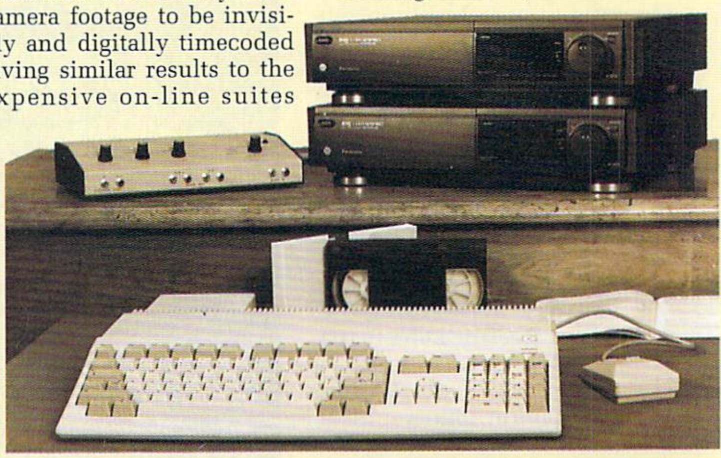
Entries should be sent to Grandslam, 56 Leslie Park Road, Croydon, CR0 6TP on the school letterhead and signed by the head teacher.

Marking time

THE Amiga A500 has been incorporated in a new timecode editing system from KRP Video Services (041-762 2510). Two specially modified Panasonic FS 100 S-VHS vcrs, a Rendale Super 8802 S-VHS genlock, a purpose-built timecode box and software make up the system.

It allows previously recorded and newly shot camera footage to be invisibly and digitally timecoded giving similar results to the expensive on-line suites used by broadcast companies.

Edit in and out decisions are made on a visibly coded copy, allowing the user to refine the edit without risk to the camera original tape. Once the user is happy with the result, the editing is taken over by the Amiga. The complete system installed and with one day's training costs £5,999.



Psygnosis flies the flag

AMIGA software house Psygnosis (051-709 5755) has continued its assault on the American market by setting up a branch in the USA. It is a move which will give the Liverpool-based company access to the best programmers the world has to offer for the benefit of Amiga users in the UK as well as their US counterparts.

Psygnosis' US office is situated in Boston and heading the operation is Jerry Wolosenko, a man experienced in the American distribution and publishing world. Initially the office will be involved in market development and sales, but there are plans to expand into manufacturing and warehousing.

"We have been selling Psyngosis branded products directly into the North American market since the company was first established in 1985 and have always considered it a major part of our business", said managing director Jonathan Ellis.

"Psygnosis has always attracted the best programmers from the UK and Europe and we are now looking forward to working closely with the best programming resources that the world can provide, particularly in the areas of new and emerging technology.

"Jerry Wolosenko has helped us enormously in our initial penetration of the US market and we are absolutely delighted that he has agreed to join us, bringing his experience and knowledge to bear directly on continuing expansion of Psygnosis in all its facets".



Take a techie trip to Mars

EVER fancied seeing the grandeur of the Yosemite Valley, taking a trip to Mount St.Helens or with a flight of imagination wandering around the lip of the Mons Olympus volcano on Mars? Amiga owners can now do this and more without ever leaving their keyboards.

The remedy for their wanderlust has been provided by Virtual Reality Laboratories, the California-based company which produced Distant Suns, the astronomy program reviewed in June's *Amiga Computing*.

Latest offering from Virtual Reality Labs (0101 805 545 8515) is Vista, a program which allows users to transform topographical data from US Geological surveys into realistic pictures of the original landscape, add colour to land, rivers, lakes and sky and correct the picture to true photographic perspective.

The Vista simulations can be produced in under 25 minutes on any standard Amiga or under five minutes on an accelerated machine.

Because of their "virtual reality" facility, users can tour their chosen landscape and photograph it from any position, altitude or angle just as if they were really there. Pictures can be saved as IFF files or as Turbo Silver object files.

Crater Lake, Yosemite Valley, Mount St.Helens and Mons Olympus are included on the first disk, but expansion disks at present under development will allow Amiga owners to explore more of Mars, the Moon and other plants or moons in our solar system.

Virtual Reality Labs is also researching undersea landscape and other areas of interest around the world.

Vista is an interesting package for the home entertainment market and to be used as a realistic background for computer games but Lance Woeltjen of Virtual Reality Labs also forsees more serious applications. These include line of site surveys, architectural previews of large developments, navigational aids, environmental impact forecasting models and space exploration.

"Vista can take Amiga users anywhere that it is impractical, too dangerous or too expensive to visit first hand", he said.

Vista is available in the UK from HB Marketing (0753 686000). As *Amiga Computing* went to press the price was expected to be £59.95.

Amiga way to A level

MATHS students wanting to reach A level standard can now enlist the help of their Amiga thanks to the latest offering from LCL (0491 579345).

Following the success of its Amiga GCSE courses in Maths, English and French, LCL has released Mega Maths, a sequel to Micro Maths.

Mega Maths includes full-screen colour graphics to illustrate problems and employes the LCL method of teaching in a methodical, step-by-step manner. As well as catering for younger students, it is aimed at adults who want to brush up on their maths.



There are 24 programs including permutations, combinations, straight-line geometry, operations on polynomials, applications of the Remainder Theorem, inequalities, logarithms, 3D geometry, quadratic equations and many more. Mega Maths comes with two books and covers up to 105 topics. It costs £24.

With the aim of putting every maths lesson a child ever has at school on to the Amiga, LCL is also working on a primary maths course.

Suitable for children from three to 12, it will include full-screen colour grahics of clowns, teddybears, butterflies, hamburgers and milkshakes and is designed to lead on to GCSE.

Animated Festival

AMIGA users who want to give free rein to their animation skills can enter a competition being run by Amiga Centre Scotland (031-557 4242) in conjunction with The Edinburgh International Festival.

Following last year's successful competition, entrants are asked to submit their offerings on either floppy disk or PAL video tape.

Finalists' entries will be on display at the festival's animation exhibition which runs from Saturday, August 11 to Saturday, August 18, open each day except Sundays from 11am to 2pm.

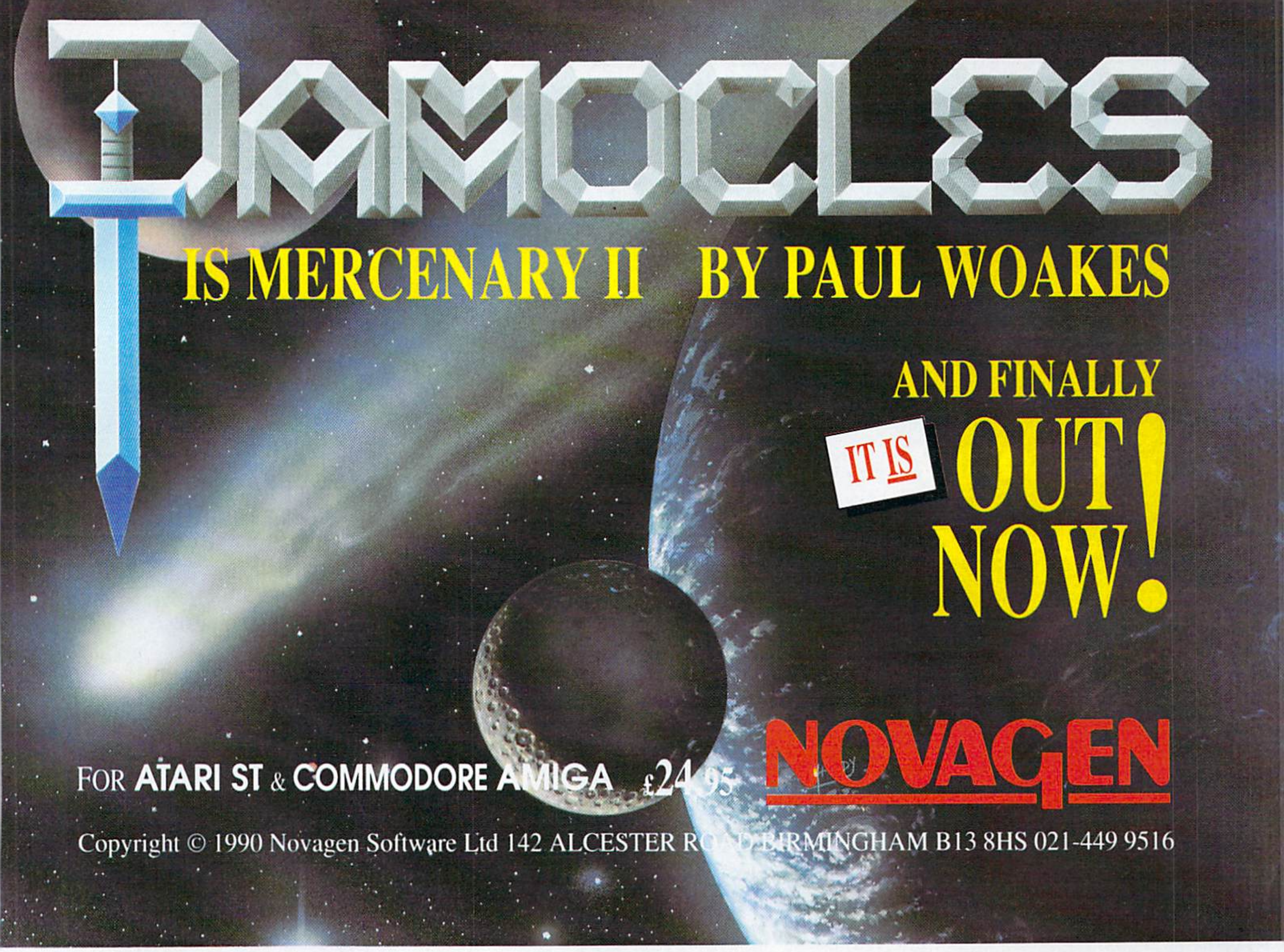
"With the Amiga now firmly established worldwide and the high standard of software now available, we expect to receive high quality, imaginative entries from all around the world", said Martin Lowe of AMS. "The prizes will be software and hardware which will be donated by a number of companies".

Entries for the competition close on July 31. Further information and entry forms are available from Amiga Centre Scotland, 4 Hart Street Lane, Edinburgh, EH1 3RN.

Enhanced presentation

LIMELITE Professional from Future Software Systems (0628 24318) is a "video typewriter" aimed at Amiga users who want to produce effective and professional presentation material.

For those who want point-of-sale information, instant messages for conventions or concerts, enhancements for music video production or video captions, it combines simple text editing features with dramatic text presentation options, graphics and scheduling of text plus pic-





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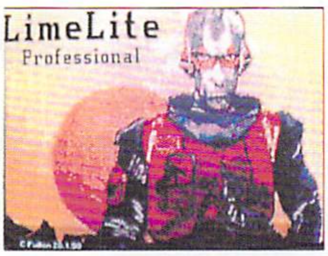
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tures and animations.

Features include colour co-ordinated menus and two help systems giving information on the active keys while using menus and the keys used for editing.

LimeLite Professional has clear and legible character fonts in four sizes, and for video wall users it offers automatic text spacing and eight colours from a palette of 4,096 for the exact colour by using RGB and HSV tools.

For professional effects, text can be combined with pre-scanned digital photographic pictures or drawings created by using third party paint systems supporting



the IFF picture format. Animated flying logos can also be played from files created with the ANIM format.

"LimeLite Professional is the video typewriter you don't have to be a mega intelligent being from another planet to operate", said Chris Fulton of Future Software Systems.

Limelite Professional works with the Amiga 500 and 2000 series and costs £945. There are two other versions, the LimeLite Junior at £120 and LimeLite at £810.

Gold fever

IT'S a busy time for Gold Disk, the software company well known to most Amiga owners for their DTP products.

Firstly, a new version of Professional Draw is due for imminent release. This will be the updated version 2.0 of the package which lets the user create scalable artwork. It's claimed this will run up to 10 times the speed of the original and automatically convert bitmapped images into structured art. Look out for a review in our next issue.

Also there is a new version of Advantage, the business spreadsheet, on the way. Even though the 1.1 version will include many new features, not just bug fixes, it will be free to registered users.

The big news however is the release of Showmaker. Showmaker is a complete multimedia package, offering the user the ability to create a complete audio-visual presentation.

The multimedia idea is not a new one. However, Showmaker is a significant move into new territory for Gold Disk and has a host of features not to be found elsewhere including software control of genlocks, video disc players and VCRs.

The package will also include a special auto-loading facility, meaning that information is only loaded into the Amiga's memory as and when it is required – thus limiting the size of any production only to the amount of storage space available, not to the amount of ram in your system.

Many audio features are to be included, with animation playback synchronised to music in frames-per-beat and MIDI sound effect support.

The release is well timed, since it is just the sort of package needed to properly utilise the new CDTV from Commodore as well as being equally useful for those concerned with video presentation work.

Bright spark

COMMODORE'S retail sales director, David Pleasance, has taken up a new post as general manager for Commodore Electrics.

In his new role he will be in charge of marketing Commodore products in countries where there is no existing subsidiary – which includes the Middle East, Eastern Europe, Africa and Greece.

Data transfer made easy

HOURS of re-typing and correcting data files can be eliminated by The Printercept, a new software package from The Music Suite (0239 710594).

It facilitates the transmition and storage of data files by making the Amiga masquerade as a printer to other computers. The Printercept accepts black and white pictures for DTP use and is able to retain formats, underlines and bolds.

It will automatically convert to various word processing formats including First Word Plus, Scribble, Protext, Word Up, Habawriter and Ascii.

Picture files can be converted to Neochrome, Degas and IFF.

The package includes a cable which is connected to the parallel port of the Amiga and the printer port of the second computer. Alternatively, the software can accept a serial communication and is switchable from parallel to serial. Files can be checked on screen before saving and the complete system is GEM based.

"We found, mainly through experience learned from our successful Cambridge Z88 – Amiga/Atari ST Links that there was an urgent need for a time saving, easy to use transfer program which was able to link to other computers", said Helen Wagner of The Music Suite.

"Everyone knows what a problem it is when you buy a new computer and want to transfer data from your old machine only to find that when you load in text you lose formatting information, apart from the irritating embedded code left over from the other computer's word processor.

"We hope this software will find a home in offices, schools and colleges – in fact anywhere where this is more than one make of computer".

Printercept costs £34.95 including cable and manual.

Top attraction



ELECTROCOIN Software (081-961 8705) has come up with an alternative to the wall poster. It's the Top Flash – the plastic strips from arcade machines which Electrocoin claims are now collectors' items.

Showing playing instructions, titles and logos, Top Strips have previously only be seen in arcades but Electrocoin is offering them to customers as part of a promotional campaign on its software. First offer comes with the strategic shoot-'em-up Time Soldier.

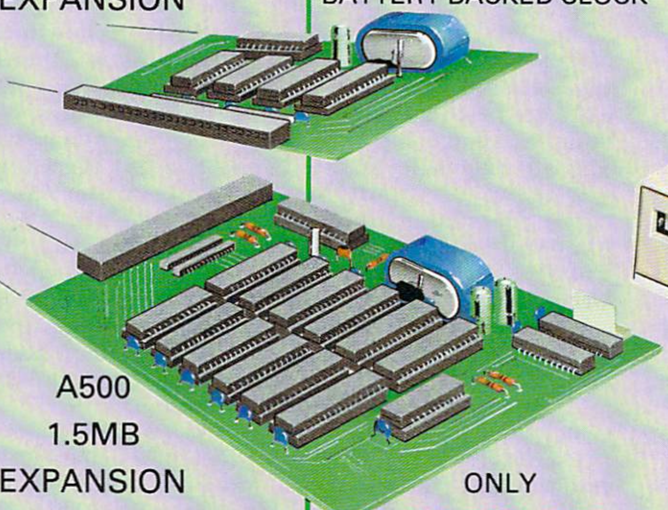
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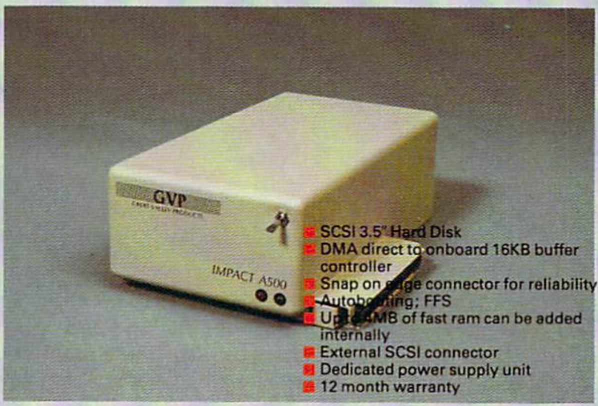


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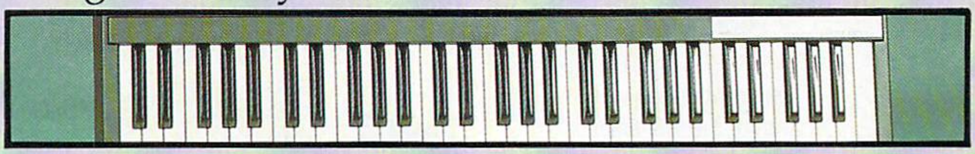
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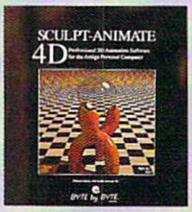
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Hi, I'm the mail man, Man. It's my job to sort your scribblin's and spill the beans on the problems we all have when DF0: starts to whirr. So if you've got something to say, say it to me.

The best letters will be sent prizes of up to £100, so get a copy of Protext into your drive pronto. Drop me a line at Ezra Surf's Postbox (ESP), Amiga Computing, Europa House, Adlington Park, Adlington, Macclesfield SK10 4NP.

Ezra



PZZZzzzz

I WOULD like to have the ability to emulate the PC on the Amiga. As far as I know there are three ways:

- Buy a PC emulator program,
- Buy a PC emulator board,
- I'm not so sure about this one. Buy a B2000 clone board so I can use B2000 cards, which means I can use an AT or XT bridge board. This would cost me around £350 but does include a 5.25in disk drive.

When emulating the PC I would like to run MSdos and be able to run PC software on both 3.5 and 5.25 inch drives.

I have favoured the second method because it increases Amiga memory as well as providing a PC processor. This method will be a bit expensive for me as I don't have very much money. This is mainly because I'm starting college soon and I'll be a student (poor!).

Robert Blayze,
Hayes,
Kent.

I don't know what it is, but I get dozens of letters every month from people who want to emulate a PC. Why? What can the PC do that the Amiga can't?

If you need a PC to use programming languages, there are plenty of excellent PD implementations that will run on a native Amiga. Basic, Pascal and C are all covered.

Worried about data compatibility? Again the Amiga can read and write PC disks with PD or commercial software.

If you have your mind made up over PC compatibility, you really only have one choice.

The Transformer emulator software is generally reckoned to be a Bad Thing, used only as a last resort. I'm not sure what you meant by the third option at all. Have you a cheap source of Amiga 2000s?

There is now a board that will fit underneath an A500 and turn it into an XT, and we hope to get one for review. It looks like your best hope.

At the end of the day it's your cash. Just think – do you really want to pretend to be a lesser machine?

Commodore on a go slow with new machine

WITH the launch of the new Commodore A3000 series I think people were expecting a little more. For one, it uses the chip set found in other Amigas.

That means that the super-fast masterbrain Motorola 68030 that beats inside the A3000 is hampered by graphics memory only 16 bits wide and running at a 7MHz clock speed. A 25Mhz 32 bit burst access by the 68030 is wasted in such occasions.

It could just be that it's faster to manipulate images outside graphics memory (in fast memory looked after by Ramsey)!

Coupled to the A3000 is a Motorola 68881 maths chip. This wonderful lump of silicon works with the 68030 to extend the instruction set and allow manipulation of big floating point numbers. Why, though, fit a 68881? Why not use a faster and compatible 68882 with its pipelined instruction method?

Zero III is rubbish. Multiplexing the data lines is clumsy. Enough said, as I hate the entire Zorro series of expansion busses.

Last grudge: Workbench 2.0 (a.k.a. Workbench 1.4 or Aboutime-2) does not support a memory management unit. With the current situation if a program suffers from B.S.E. (or just plain bug-infestation) and it spews data all across the computer's memory, there is no way of stopping the rogue program from damaging other programs which are multitasking along with it.

Memory management would help to alleviate the problem by denying an application access to certain areas of memory. It can also fool a program into using a hard drive by informing the operating system when access to a page switched over to disk space is required in main memory.

The 68030 has a memory managment unit (MMU) built in. 68020 users have access to the 68851 MMU chip. But what about us lowly A500 and A1000 owners? Well, if Commodore had opted for the 68010 instead of the current 68000 then we would have had access to the 68451 MMU.

The 68010 is not much different from the 6800 (they are pin compatible), yet I can find no details of the 68451 – is it still in production and what did it cost?

In the end I expected more from Commodore. Still, I think my Amiga 500 is just brilliant – what other machine has an IFF!

John Christopher,
London.

The decision to stick to the 7MHz clock speed for the custom chips has certainly disappointed quite a few people. However, the chips are definitely **not** *the same as those fitted in most Amigas. Take the non-interlace high resolution modes and the 2Mb of chip ram as examples.*

A bit fishy

I WOULD like to start this letter on a rather bad note concerning the latest game from Cinemaware/Mirrorsoft. That's right, TV Sports Basketball.

As you know, the game is carried out in the style of an American sports programme. I know from past experience that American programmes are sponsored by certain companies like soft drink manufacturers. This doesn't particularly bother me.

I was however amazed and disgusted to see the sponsor for one of my basketball games as "Charlie's Alaskan Oil" with a picture of a dead fish lying in a pool of oil. Is this some sort of sick joke referring to the "Exxon Valdez" oil slick off the Alaskan coastline?

If it is, I find it hard to believe

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how a computer software house can have the audacity to stoop so low with this sick sense of humour, especially Cinemaware, who have given us such high quality games like Rocket Ranger, TV Sports Football and It Came From the Desert.

How anyone should be allowed to make a fast buck out of this is beyond me.

Robert Hay,
Edinburgh

Funny how people get all worked up over the mistreatment of animals, and yet are a bit slower to complain about the mistreatment of people. Anyway...

Ecologically speaking, the entire computer business is far from blameless.

The construction of the integrated circuits that sit in your Amiga require some of the most toxic poisons ever created. Silicon Valley is far from being environment friendly.

Now I'm not saying that your Amiga is responsible for the death of a few species, but what are you doing to redress the balance?

To quote: "If you're not part of the solution, you're part of the problem".

DTP disaster

I AM a graphic artist and currently own an Amiga with Professional Page and Professional Draw DTP packages. The big problem I am facing is that I have tried city bureaux and none of them support Amiga Pro Page.

The reason I require bureaux is that I am creating letterheads, business cards and so on, and wish to process my disks on to film, positive or negative, or bromide paper. I need professional quality.

Please, please, help me. Everywhere I have tried have said that they only support Apple Mac or IBM. They have advised me to change from Amiga to one of these computers, and they have said the Amiga is not capable.

I am very upset at this, because after your article in the April issue of *Amiga Computing* about DTP I purchased £400 of software. Now I have come across a major stumbling block.

You are my last and only hope to sort out this DTP disaster!

Kevin O'Neil,
Cumbernauld.

Not capable? Hah! But until those bureaux realise just what the Amiga is *capable of, we will have to make one or two little sacrifices. What you need is a product such as MessyDos, CrossDos. Mac-2-Dos or Dos-2-Dos.*

These programs will copy your Amiga Postscript files on to either Mac or IBM format disks, which the old-fashioned technologies of IBM or Apple should be able to read.

Mac-2-Dos (reviewed in Amiga Computing, June 1990) seems your best bet, as it handles Postscript files specially. The only drawback is that you'll need a Mac disk drive. Try calling Central Coast Software 0101-303-526-1030. Yup, they're state-side.

Business program

I HAVE tried locally, without success, to obtain a business program for an 1Mb Amiga 500 to do payroll duties for approximately 200 employees.

I have been pleased with the A500 and hoped it would have the facility for small business use after I had upgraded it with the 501 ram.

R.J. Kirk,
Bangor,
Northern Ireland

Tech Ed AJ got very excited when I showed him your letter. Not because he knew the answer, but because you're from his home town. When asked to answer the question, he continued to stare into space and mutter "The Windsor". Goodness knows what he was on about.

There seemed to be a lack of this kind of serious software on the Amiga, but perhaps the tide is turning. Take a look at Arena Accounts (reviewed last month in Amiga Computing*). You might also try Digita International (0395 270273) or T.A.M. Marketing (0392 215485) and explain what you are after.*

Alternatively, you should contact a public domain library. There are several business packages out there ready to be had for next to nothing.

The major problem is that they might be American and want to pay everyone's wages in dollars. All right if you're in California, but not really on when you try to cash the cheque in Ballyholme post office, Co. Down.

The last resort is a bit ironic really. After slagging off PCs, this is a case where they might come in useful. More boring software has been written for the PC than Green has had beards.

You will need an emulator to provide access to the many programs available in the PC public domain.

Terminal problem

I am the proud owner of a 1Mb A500. I will be starting a B.Eng (Hons) degree in electrical and electronic engineering at Nottingham Poly from October.

I have just bought a modem. The Poly has Vax computers which can be accessed via the PSTN and operates on a V22 standard. In order to use the facilities for text, the Amiga must emulate a DEC VT100 terminal, and a Tektronics 4014 for graphics.

I own Transformer. Would it be fast enough for file transfer? Perhaps I need the KCS Power PC Board?

The A3000 appears amazing. When the 9000 is released are they going to change the name from Amiga to HAL, and Commodore to ATN? Yes, it's still full of stars.

David Bowman,
Near the Monolith,
Orbiting Jupiter.

A bit of ferreting around turned up the dude's real name and address: Martin Gray from Nottingham, which is slightly closer to Earth.

A further bit of ferreting around and a quick Email message to JR gave us the solution. Never mind the PC emulation – just get hold of the PD FISH disk number 257, and a program called VLT. It emulates both the graphics and text terminals you want.

Angus antics

WHAT I want to know is...
1. What does the fatter Agnus do?
2. Can Workbench 1.3 work on a Kickstart 1.2 machine?
3. What advantages does the Kickstart 1.3 rom have over the 1.2 rom?
4. I am looking for a program, cheap if possible, which converts MSdos files into AmigaDos. Is it true I need a recoverable ram disk for such a program, or can I use Workbench 1.3?

Martin Chadderton,
Heyside,
Royton.

1. The new Agnus provides the **possibility** *of having 1Mb of chip ram. New machines have the fatter Agnus, but if you want to fit it to an older machine some slight modifications to the motherboard will have to be made.*
2. Yes.
3. Kickstart 1.3 will autoboot from hard drive or recoverable ram disk (RAD: device). One or two slight bugs have also been fixed.
4. A PD program such as MessyDos does not need a RAD: to work. That said, you should really try to get hold of Workbench 1.3 as it is an important upgrade to the earlier Workbench. The manual alone is worth the asking price.

The 300,000 dollar question

IN the Virtual Reality story (*Amiga Computing*, June 1990) I see I wrote that the Autodesk 3-D CAD system costs $300,000.

This is wrong. The gear costs about $30,000 and you should be able to buy a working set-up (real soon now) for a probable $60,000.

The text file must have got corrupted.

Peter Ceresole,
London.

You heard the man, rush out and get yours now. I wonder where they hide the office petty cash box in this place?

On the right track

SEEING a trackball available by mail order and having little space for a mouse, I bought one.

On receipt I discovered that is was for MSX computers. I feel sure others will do the same thing, so I want to know whether a short cable will enable it to work on my

A500, and make a happy Amigan to boot.

Alan Soundy,
Leatherhead,
Surrey.

Now that is a good question. Which means it's better than the answer you'll get. Unfortunately we don't have an MSX computer in the office to look at the pin outs so I can't say for sure.

However, most mices and trackerballs work on the same principle: Two small slotted disks rotating between a light transmitter and a light receiver. These produce pulses which are sent via the joystick port and the computer decides to move a pointer or whatever.

What you do next depends on how brave you are. Personally, I would take the trackball apart, and try and discover which lead went to 5 volts, which to ground and which were for left/right and up/down.

Then I'd cross-reference these functions with those detailed in the back of the A500 manual, make up a lead and try it. Of course, I didn't tell you that.

There is a faint chance that this may break the Amiga. I can't see how, but perhaps the MSX system works differently. Your only totally safe bet is to try and get details of the MSX mouse port. Anyone want to admit owning an MSX?

New Zealand story

I DON'T know if you are the right person to complain to, but I do wish to express my dissatisfaction at the discontinuation of the cover disk from the February edition.

Hopefully if enough people complain, the powers that be will reconsider their decision and re-introduce the disk.

Tony Lambert,
Upper Hutt,
New Zealand.

You had the right idea. It worked.

Hopefully by now you will have received the May issue complete with disk.

Fancy footwork

HAVE you ever had the problem when printing out hundreds of documents that slowly but surely the darkness of the print gets lighter? Well, here's a tip.

Simply go down to your local shoe shop and buy some suede show dye (black) then when you get home remove the ribbon case from the printer, take the top of the case carefully – otherwise the ribbon will fall out – then dab on the dye and let it soak through.

Let the ribbon dry for about an hour and you will have a new ribbon.

P.J.Nutter,
Chippenham,
Wiltshire.

Sigh. Another home cure for printer ribbons. The inventiveness of people never ceases to amaze me. It's not india ink it's WD40 or petroleum jelly or tying a potato around a ferret and burying it in the back garden on a moonless night.

Sure man, go ahead and cover the ribbon in all sorts of strange black dyes. It might even work.

Unfortunately, it will also break your printer. Listen folks, printer ribbons are not like typewriter ribbons. Ok, so they bear a passing resemblance. Like they're both black. And ribbon shaped.

But that's it. The "head" of a dot matrix printer is a very sensitive piece of engineering. The tiny pins are manufactured to within a fraction of a millimetre.

By covering them in strange concoctions you will soon jam them up with all sorts of crud. Then they'll break.

The only safe way to re-ink a ribbon is to use specially designed ribbon re-inking ink. Really. The stuff that I use is called Refresh, costs less than a tenner and is available from several places via mail order. If it was ozone friendly it would be perfect. But if you're in any doubt, buy a new ribbon. They're cheaper than a new printer.

P.S. Is that your real name?

Hurrah for green

I HAVE just discovered you magazine, and I must say it's wonderful. Not only is it cheaper than many others, it has even given me a wonderful disk with a lot of superb programs.

I must really thank you for giving to us, the Spanish readers, such a good mag. *Amiga Computing* going green is good news for all of us too. I'm glad you had that nice idea.

The only thing in which I have anything to blame on are the photographs of Amiga screens which appear in your magazine. They seem to be taken directly from a colour printer, and although this way we can really "see" the pixels, the quality isn't as good as it could be. Isn't there any way you can improve that?

Fermin Bernaus Berraondo,
San Sebastián,
Spain.

Thanks for your comments on the mag. We kind of like it too.

On the subject of screen shots, we are now using a brand spanking new, totally Top Secret technique that has been called revolutionary and has nothing whatsoever to do with colour printers.

We believe it to be a great

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Gee, thanks (blush)

I AM writing to thank you for publishing my letter in the June *Amiga Computing*. I took your advice and bought a Naksha microswitched mouse, and I am delighted to say I can now sit down and enjoy stress-free use of my Amiga.

I ordered the mouse from Power Computing in Bedford, posting the form and cheque of Thursday evening. I received the mouse on Saturday morning.

I am very pleased with it indeed. For the first time in over a year I have been able to use mouse orientated software without feeling intense frustration at the lack of response from the left button.

It is all due to you, O Great and Knowledgeable One, that peace is restored and the house is no longer filled with the sound of banging as my head hits the ceiling. Seriously, thank you for all your help.

Katharina Spencer,
Basingstoke,
Hampshire.

You're welcome.

HELP FILE

The dreaded pound sign

ANDREW Cairns had a query regarding not being able to print a pound sign when using Scribble.{Q]

If he uses shift and 3 he will get a hash mark on the screen but when the text is printed this hash sign will actually print as a pound. Well, at least it does when using the EpsonXold driver.

Graham Lassiter,
London.

It also depends on your printer. Many have internal DIP switches that determine whether a hash, a dollar or a pound sign get printed.

This is one of those cases were experimentation and lots of coffee are the order of the day. If you can speak Japanese-English the manual might help, too.

Strange printer

I HAVE the opportunity of obtaining a Memorex Telex I210-I dot matrix printer, so I would be grateful if you could tell me if it can be used with my A500. If so, where could I obtain the correct cable?

Also, how do I make a backup of the June coverdisk? It will not let me do it in the usual way.

Tony Warren,
Kingsteignton,
Devon.

I have never come across this particular brand of printer, but it is likely that it has a standard parallel Centronics interface (which looks like a two inch long socket with two clips on either side). If so, all you will need is a standard lead available from most dealers.

You should be able to get text out of it using that old favourite, the EpsonXold printer driver. Graphics might take more experimenting. Another long coffee session.

To copy the coverdisk, first boot with your standard Workbench disk. Now eject that disk and insert the coverdisk. Highlight it – click on it once – and select Duplicate from the pull-down menus. Follow the instructions and you have a copy. I know it works, 'cos I just did it.

Deutschland über alles

HAVING just returned from a regular trip to Germany I had to write about the laudable state of Amiga technology in this country.

Before my one week trip abroad I saw the new Amiga 3000 at the Which? Computer Show. I was impressed that this debut should be in the UK. Imagine when I arrived in Germany the following Monday to find not only magazine articles about the machine but also a full review of a Hurricane 50Mhz 68030 card.

Part of my annoyance was abated on returning to the UK by your sketchy review of the GVP 3001. But my, are we so far behind?

My other pet gripe is the price of peripherals in this country, they are at least 30 per cent higher than in Germany or the USA. Why are British companies so greedy or so poor at negotiating retail prices? Roll on 1992, Europe is going to walk all over us.

Here is a tip for Amiga Bridgeboard owners. If you are not using your Bridgeboard you can take advantage of the board's dual port memory by adding the following to a batch file:

```
BINDDRIVERS ADDMEM 20000021DFFF
```

This will provide another 115k of ram.

Mr M.F. Tucker,
Camberley,
Surrey.

The British Amiga market is just getting over the games machine stage. This was due to the way Commodore have marketed the A500 computer, bundling it with games software.

Germans have a much better idea of what the Amiga is capable of, and are keen to exploit it with all sorts of amazing hardware. More competition, lower prices.

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improvement on the old system, which used to entail Green running down to the chemist every five minutes. As with all new processes, it will take a while to settle down and attain perfection. We're working on it.

Money for nothing

I CAN see no reason for software companies to charge the same price or more for a game that has been ported from an ST and then had its graphics changed.

I believe that the Amiga version should be about £5 *cheaper* than the ST version. There is a completed game on the ST, what happens next... the programmers touch up graphics, enhance the sound and maybe gameplay, and that's it, finished.

It seems to me that ST ports should be £10 or £15 at the most.

Ashley Searle,
Oakwood,
Leeds.

Hmmm. Seems fair enough to me. I was chatting to the well known programmer Andrew Braybrook at a recent fair, and he said he would much rather program the Amiga than program the ST and then port stuff.

As a result, Powerdroid 90 will be specially written to make use of the Amiga's superior graphics and sound. It will be well worth waiting for.

If only more games programmers would follow this lead.

Contain yourself

PLEASE can I take up the challenge on page 64 of the June issue regarding writing music for your disk in contained modules.

I have been very unlucky in the past trying to get help from the people who used to be my favourite magazine (previous letters enclosed for proof). Fortunately most of the problems have healed with time but I would appreciate a little help on the following.

How do I write my music in contained modules? I have quite an assortment of music programs if these help. I am having to produce my drum notes with Deluxe Paint – is there an easier solution?

Ken Wooffindin,
Sherburn-in-Elmet,
Leeds.

Thanks for the letters. They made interesting reading.

The module in question is a data file that not only contains a list of all the notes that make up a tune, but also the samples needed to play them.

Several PD music programs will save data in such a way, typically the infamous Sound Tracker and clones. To be on the safe side, look out for the totally legal and cool MED v2 which is available from PD libraries all over the planet.

Writing out musical notation is a different problem entirely. For that you will need a piece of software such as the rather expensive Dr T's Copyist Professional. If you are only going to be producing drum beats and not orchestrated symphonies then Dpaint is probably the best bet.

Spot the ST user

I READ your article in the February 1990 issue on Elite. I have the Atari 520ST and have been stuck on mission five for several months now.

I have left the computer on for days trying to achieve this mission. Sometimes a malfunction appears, and I lose hours of playing the game. Also the program crashes and on the screen appears "TRAP # $02-2265FFFF0000 22D8230400021294". These numbers go off the screen. Can you explain this, or have I got a faulty disk?

I wrote to the manufacturers (Firebird), but they did not reply.

John Haldane,
Camphill Estate,
Nuneaton.

This must be a first! A letter sent to Amiga Computing *from an ST user. What a brave person.*

But good old Ezra is not one to scoff at lesser computers and their misfortunes. Well, all right then, he is. Scoff, scoff.

Nevertheless, on your behalf, I took the day off work to visit the new, improved offices of the new, improved ST User magazine, and spoke to that most crucial of dudes, Roland.

He says that there was a bug in the Elite program itself that caused the mission to fail. Personally I thought it would have been the backward hardware that was to blame.

Anyway, if the software is at fault, you have a legitimate complaint with the software company. Don't let them get away with it!

Winge, winge

I HAVE been reading *Amiga Computing* for some time now, and overall I think that it is definitely the best magazine for the Amiga.

However, I have some comments to make. I think the games section of the magazine is excellent, but that the system of giving ratings out of 15 could be improved by giving percentage ratings on each of Graphics, Sound, Gameplay and Value.

Still of the games front, do you think that you might be able to give us a page of your 40 Best Games of All Time or something similar each issue, or to say which of you liked which games most, so that we can get varied opinions or, even better, both?

Finally on the subject of games, do you have to write up games which are going to get something like 30 per cent or less? Surely it is just a waste of magazine space. Although you will say "How will you know which games to avoid?", I only buy games which you specifically recommend, not just anything I happen to see.

Also, do you think we might be able to have more reviews of software, such as word processors, databases, spreadsheets, and music and graphic programs, or fairly cheap but useful hardware, such as the Soundblaster, instead of so many articles about programming in machine code, and amazingly complex articles on Chaos, which I cannot understand large parts of!

I am sure there are many other readers who feel pretty much the same as me.

Ian Martin,
Tonbridge,
Kent.

But apart from that, you liked it, yeah?

Bit on the dense side

WE all know that the Amiga is the best personal computer available today, at least for the price tag.

What really gets me wound up is the Amstrad 8512, which should not be much of a threat to the likes of us. Unfortunately it does have one facet that seems to move it apart from most personal computers, and that is a DTP program called Microdesign II.

This £50 program can drive my little Start LC10 into the ground with results that make Amiga programs like Deluxe Paint and PageSetter look like Sinclair printer efforts.

Surely it is possible to persuade my DTP and Dpaint programs to print in something other than single density? I have scoured the manuals and found no reference. Please help!

Michael Bassett,
Mutley,
Plymouth.

Don't you believe it! Amigas outclass Amstrads by several powers of magnitude. There are two reasons why you might have been temporarily fooled:

First, you have PageSetter and not PageSetterII. The improved program (reviewed in April 1990 issue) has scaleable fonts, which means no matter what point size you choose, there are no jaggies. Even with a nine pin printer the results are amazing.

If you could only see the output when the Amiga is linked to a laser or PostScript device then you would be embarrassed even to use Amiga and Amstrad in the same sentence.

The second problem is that you have missed the Preferences drawer on the Workbench. In here are all the density settings you'll need. They are kept in one place so that they can be shared by all programs, be they art package or DTP system.

Device advice

PLEASE allow me to congratulate you for an excellent magazine and a mouth-watering disk. Being a novice but rather mature (37) Amiga user I find any hints or tips most helpful. At present I have access to an A500 with 1/2 meg, an external 3.5 floppy and a Star LC-10 printer.

My problem is two-fold. Firstly when running "PPMore" I find that I cannot get a print-out, when clicking on the print file or using "p" on the keyboard I am told "could not open printer-device". I have set up the printer correctly using the EpsonX driver in the devs/printer directory and the printer.device is in the devs directory.

I have a similar problem when trying to print files from the excellent SID utility program which you supplied with the January issue. Secondly, I wonder if any of your readers have come across another problem I am having with SID. While using the mouse to select files or directories the machine locks up causing the dreaded "Guru alert".

I have found another problem while using Kindwords. While scrolling using the mouse on the page (not the slider or bars) the scrolling does not seem to keep up and this causes a crash but without the Guru – I usually end up with the side of the picture running up the centre of the screen and there is nothing left to do but reset. Is this an acceptable bug or is my machine in need of a visit to thee doc?

You may include my address and if anyone wants to write with any tech. hints or news I will reply.

Keep up the good work.

Adrian P. Watson ,
22c Marquis Road,
Woodside,
Aberdeen
AB2 2QU

Well, you're not having a very good time of it are you? The reason the PPMore won't work is that the parallel.device is missing (assuming you are using a parallel printer). It should be in the devs directory. In fact it should be in the devs directory on the Cover Disk but Jeff forgot to put it on. His excuse is that he's "only human" but none of us really believe that.

It's very difficult for us to give any advice on SID other than to read the documentation thoroughly. The fact that it is so flexible and that there are so many ways of setting it up makes giving specific advice without specific details impossible. The mouse problem isn't one I've heard of before.

If you're having more problems with your printer it might be an idea to check out the devs directory on this month's cover disk. You might find something useful.

Drop the line – bulletin board corrections

IN your July 1990 issue of Amiga Computing you featured NComm V1.9 on your coverdisk and also gave a lengthy description on page 62 about the program, telling us that comms is the "fastest growing Amiga fad in the UK".

After reading this article and seeing a local number listed in my area I thought, "Great!".

After some thought (I have always wanted a modem) I decided to place an order for the Eurolink modem. A day or two later I decided to try out the number you supplied to see if it was working and...it didn't exist! I asked the operator if it had been changed and she said that it was a spare line. Now my modem is on the way and the only numbers I have are not local. Please can you supply one more for the Manchester area or I will get a wopping great telephone bill.

Andrew Griffiths
Worsley, Manchester

You're right – all that number does now is go "beeeeeep". The trouble with trying to compile a list of BBS numbers is that they change so quickly.

At the time of writing, the BBS at the end of 061-339 0337 would love to hear from you after 10pm and before 7am. They should also be able to put you in touch with other local boards.

Other corrections: The Parallel Dimension's board has undergone a change of name and number and is now Treasure Island on 0992 447273, on-line 9.30pm to 8am and 24 hours at the weekend. The number for the Hal BBS was incorrect, and should have been 0488 681069.

If Sys-ops would like to write in with board numbers, baud rates and access times we would be happy to compile a list.

HELP FILE

More mice

I HAD a similar problem to Katharina Spencer with my mouse. New machine, and left button unusable. Replacement given, but two days later putting on New Leader Board gave intermittent length of putts.

I stripped mouse cover off, peeled back adhesive tape, and gave contacts a light clean. I then gave them a small squirt of switch cleaner (or WD40), replaced cover and all has been rosy since.

J.P. Sabiston,
Edinburgh.

Katharina solved the problem her own way. We've had the discussion before, but the "blister" or "bubble" type switches in Amiga mice can prove to be a real pain.

Mine needed taking out and bending slightly to put some spring back in them. Then the ball started slipping when the mouse was moved vertically. Enough to drive you crazy. I think Aj has the right idea with his Marconi trackball.

Startup sequence

I HAVE the Protext word processor and it is superb but I would like it to load quicker. As soon as Workbench 1.3 shows, I type Ctrl D to go to CLI, type Protext and it loads quickly enough.

How do I go about writing a startup sequence to do this?

J.P. Sabiston,
Edinburgh.

First, only play with the backup copy of your backup copy in case something goes wrong. Then open a Shell window and type :

```
ED df0:s/startup-sequence
```

This will use the standard editor to display the contents of your startup sequence. Move the cursor down to the part that says something like LOADWB. This is where the Workbench is called into action.

Delete this line, and add:

```
df0:PROTEXT
```

This assumes you have the PROTEXT program on the same disk that you boot with and not in any directories – you'll have to change this depending on where you keep it.

The CODE CLINIC

More problems, more solutions and much more ARexx. C programmers rush to help Aj with his fortune

IN the clinic waiting room this month we have a large cross-section of programming problems. They range from the slightly down-to-earth generation of random numbers in C to the dynamic and exciting playing of sound samples from AmigaBASIC.

We start with an introduction to that strange-sounding language, ARexx. A self-confessed ARexx fan, Stewart C. Russell has been giving everyone in the office elocution lessons in this awesome concept for several months.

To put him out of our misery once and for all, what better way to get it all out in the open than by asking him to write an essay for us. OK Stewart, you may now turn over your examination paper. ARexx is the best thing since sliced bread. Discuss.

IT can't have escaped your notice that of late a lot of applications are proudly proclaiming ARexx compatibility. Why the fuss ?

How is it possible that a £40 package can mean so much to so many? And why is Commodore including it with the fabled AmigaDos Release 2.0?

ARexx – you *have* to pronounce it (take a breath) "A" (pause) "Rex" (pause) "X" – is nothing more than an interpreted language. It's a variant of REXX, used on some IBM mainframes to write utility macros to automate repetitive or complex tasks.

ARexx keeps the keywords and syntax of REXX, but adds a great many Amiga-specific functions in its support libraries, making clever things like Requesters and Alerts accessible in one line of code.

ARexx is also a typeless language in that it has only one type of variable – the string of characters. This is perhaps best illustrated by an example:

```
/* Painless Concatenation */
Number=5
String='Green Bottles'
other=2*number string
SAY other
EXIT
```

which outputs

```
10 Green Bottles
```

to the console. This is a better first program than the "Hello, World" used in language manuals ever since Brian and Dennis (aka Kernighan and Ritchie) wrote The Book, since it shows most of ARexx's unorthodox features.

First off is the comment: Every ARexx program (or macro) must start with a comment to force the programmer into doing some documentation. The next two lines create and fill two variables, *Number* and *String*, with (surprisingly) a number and a string. Note that there's no necessity to type and pre-declare variables.

The fourth line does the most work. It makes a trivial calculation (2 * Number => 10), sticks a space and the string "Green Bottles" on the end, and assigns everything to the variable *other*.

Modula-2 people, sickened by the brutal disregard for Decent Syntax, will be shocked to note that ARexx considers the variables *Number* and *number* to be identical – it is case-insensitive.

Most of the work has been done by now. The keyword "SAY" (which could equally well have been "say" or even "SaY") outputs our freshly-baked string to the console.

The "EXIT" keyword is quite unnecessary: ARexx knows when a macro is finished, so this is merely included for neatness.

ARexx isn't just different for the sake of it. ARexx (and REXX before it) was designed to send information between concurrent tasks, so the simple and powerful string manipulation facilities allow complex commands to be built up easily.

AmigaDos is built on a message-and-port system, and ARexx uses a special kind of port to transfer information. These ports are addressed by name – for example, the ARexx public port is called *REXX*, and the port for the superfast text-editor QED is called *QED1*. If a program has an ARexx capability – in other words, it sets up a named port, and can deal with incoming messages – it can exchange data with ARexx and other ARexx-capable programs without user intervention.

Even although ARexx is very small, weighing in at only 32 Kb of shared library, it is designed for communication between applications programs. As a serious tool for interoperability it requires at least 1Mb, and a hard drive would really help.

It is CLI-based, but macros can be given an icon, and then they work fine from Workbench. With a bit of work, it is possible to give any CLI program an Intuition interface using ARexx – you could banish the "I can't remember which switches to use with this compiler" blues with a click of the mouse. You could even operate programs remotely with an ARexx-capable comms package – a hark back to the days of time-shared systems!

ARexx can make the programmer's life far simpler – the repetitive cycle of edit, store, compile, assemble (sometimes) and link is fraught with possible errors. With an editor like Cygnus Ed, QED or UEdit (all ARexx-capable) you can complete this cycle ➤

without leaving the editor, and in most cases get the editor to highlight where your source code goes askew. This alone is enough to get most programmers to shell out for ARexx.

As recently as one year ago it was possible to list all the ARexx capable packages at the end of an article, but now there are so many that it would take longer compiling the list than it would writing the prose.

They range from flashy hypermedia to the driest compiler, from public domain to "re-mortgage the house". Commodore has included ARexx with the new operating system, so any company which ignores ARexx is ignoring the future.

Any user who ignores it is missing out on better possibilities for creativity, and a great little language too.

ARexx is available from many mail-order outlets and computer shops, priced at around £40. If you are lucky enough to own an A3000, ARexx is included with the system software.

Random access

I remember asking for good ways of getting a random seed to use with my C program Fortune Cookie. This was obviously not a unique problem, as every game ever written requires some form of randomness, but the Amiga provides some rather cunning techniques for getting some really unpredictable numbers.

Three kindly folk sent in solutions, the first of which came from Alan Smith in Norwich. According to Alan, looking at the current position of the video beam produces results which will change sufficiently quickly to suit our purposes. Listing I uses his technique to pick a random message.

Solution number two comes from Russell Young. Russell was clearly not impressed with my overlooking the fact that using the system clock does in fact work perfectly well. My problem was that I was using an Amiga without a *real-time clock module* and so on my machine the program refused to produce random numbers.

Russell was kind enough to supply the code necessary to correct things, but also hit on a rather clever way to further randomise the number. Here is the micro-listing:

```
long t;
time(&t);
srand(t);
```

He continues: "If you want to get really random about it, you can convert it to a string before calling srand(), and then reverse it. For example, 123456 becomes 654321. The means every second would change by so many thousands, rather than so many units. Then convert the number back to a string by calling atol(), and call srand() again."

The third solution was sent by a certain Steve Hawtin from Basingstoke. Does this name sound familiar? It should, you know. How about if I told you that his example was tested with NorthC? Ahh! you say, now you remember. Yup, Steve is the man who brought C to the masses. A man whose very source code I am not worthy to lick.

Nevertheless, I shall attempt to list it for you, right here and now, in the shape of Listing II. The full version is supplied in the Code Clinic drawer of the cover disk, although I had to change one or two of the pieces of advice! It uses the Amiga's system clock facilities again.

By making these alterations, your fortune can be more accurately predicted each system start-up. Have a nice day, now.

Banjaxing Basic

If you thought AmigaBasic was for sissies, then Matthew McGoowan of Gloucester has some interesting news for you. He has very kindly supplied a collection of programs that provide various features for the serious basic programmer. Well, perhaps "programs" isn't quite the correct word – "hacks" would be a better description.

As these routines do various dubious things to poor, unsuspecting AmigaBASIC, you are encouraged to use them only on programs which have already been saved to disk. I repeat – only use these hacks when you are certain that if they go wrong,

Listing I

```
/* Using video beam to make random numbers */

#include <exec/type.h>
#include <hardware/custom.h>

main()
{
        /* Get the starting base for 'custom' */
        extern struct Custom far custom;

        UWORD number;

        /* Get the number from the custom
           registers */
        number=custom.vhposr;

}
```

Listing II

```
/* Part of Fortune Cookie v2.1 */
/* Edited to work under NorthC by Steve Hawtin
*/
/* Indentation changed as well */

#include <exec/type.h>
#include <stdlib.h>
#include <stdio.h>

#include <libraries/dos.h>

struct DateStamp date_now;

void main(argc)
    int argc;
   {
    int number;

     /* Read the datestamp, assumes you have a
real time clock and that

        SetClock load

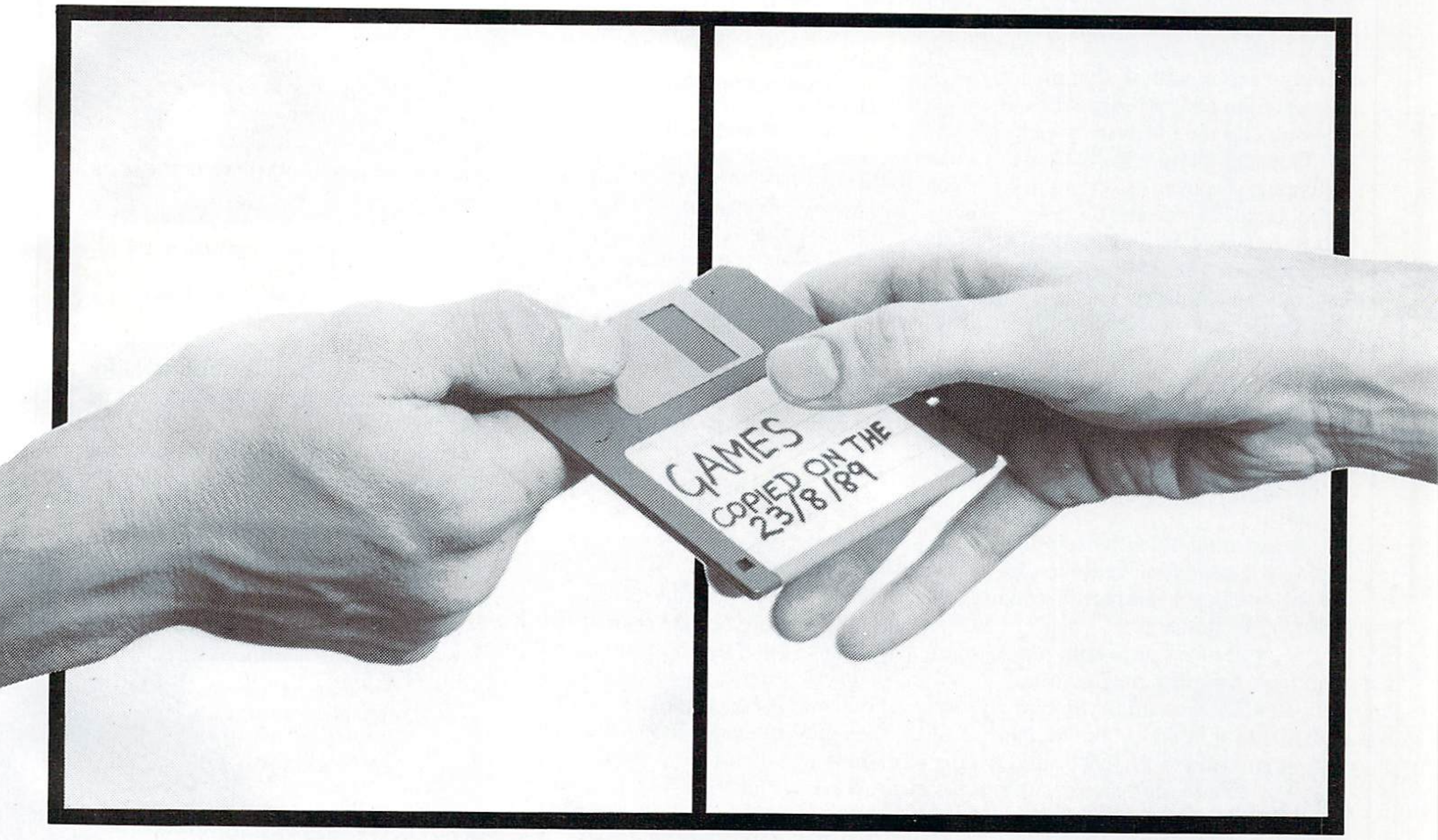
     has been done by now */

     DateStamp(&date_now);
     number = date_now.ds_Tick % 50;

     printf("\nThought for the day:\n");

     switch (number)
        {case 0:printf("\n\nFortune Cookie by
Aj/SH...");break;
         case 1:printf("Meanwhile in
Czechoslovakia...");break;
         case 2:printf("Just reformatted your
drive...");break;
         ...
         default:;
         }
     printf("\n\n");
     }
```

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So with the warnings out of the way, on with the listings. The first is a darn cunning way of playing samples directly from within Basic.

Technically speaking, the raw (uncompacted) sample data is loaded into chip ram, and the audio DMA told to get on with it. You must supply the address of the data, its length and the playback speed.

Once the sample has started playing, stopping it can prove a problem. The correct, but tricky, way is to intercept an interrupt. The cunning way is to supply a silent sample to be played immediately after the noisy sample. No prizes for guessing the technique Matthew has used.

Non-technically speaking, you should be able to copy Listing III into your own program and obtain professional quality sound effects as a result.

If you are looking for samples to play you can either raid the piggy bank and buy a sampler cartridge, or join a PD library.

Most libraries have large stocks of suitable samples, ranging from musical instruments to animal noises. By using another public domain program such as Perfect Sound, you will be able to save samples in their raw format.

Our next progette concerns opening windows from AmigaBASIC which will not have any gadgets or borders. Listing IV will open a gadget-less window, and then use the blitter to zap away the edges.

The following routine will allow you to control whether or not menus will appear from inside your program.

```
'Control access to menus
        menu&=(PEEKW(WINDOW(7)+24) AND &HFFFE)
'disables menus
        POKEW (WINDOW(7)+24),menu&+1
'enables menus
        POKEW (WINDOW(7)+24),menu&
```

Have you ever written a basic program and wished to be able to determine the state of the right hand mouse button? What, you have? Well you're in luck, for although AmigaBASIC provides no functions to find out what is going on, we can also use a little bit of judicious peeking.

```
'Reading the right hand mouse button.
'rm&=0 when button pressed  rm&=1024 when not
'pressed
        reg&=(4096*&HDFF)
        rm&=(PEEKW(reg&+&H16) AND 1024)
```

Here is the solution to the problem that has plagued AmigaBASIC programmers from the very start: How to get rid of that pesky mouse pointer! Not every program needs to make use of the menus and requesters, and at times the little red arrow is nothing more than a distraction. Here is how to switch it on and off at your command.

To temporarily stun the mouse pointer use the poke:

```
'Clobber the mouse pointer
        reg&=(4096*&HDFF)
        POKEW reg&+150,&H20
```

To bring it back to the land of the living, we use another poke, like this:

```
'Bring back Mr Mouse Pointer
        POKEW reg&+150,&H8220
```

The final poke will prevent those embarrassing returns to the Workbench screen whenever the system needs to pop up a window to remind you to insert disk such-and-such.

```
'Forces nearly all requesters to the
'current output window
        scrn&=PEEKL(window(7)+46)
        pokew (scrn&+20),17
```

When you play with the fruit machine program on the cover disk you will be able to see these techniques used first hand. They make great examples of what you can do with Basic if you put your mind to it.

Send your clever solutions or techniques to:

The Code Clinic
Amiga Computing
Europa House
Adlington Park
Macclesfield
SK10 4NP

MicroLink: Mag048
CIX: amigacomputing

Listing III

```
DECLARE FUNCTION Allocmem& LIBRARY
DECLARE FUNCTION xOpen& LIBRARY
DECLARE FUNCTION xRead& LIBRARY

LIBRARY "dos.library"
LIBRARY "exec.library"
'library functions from OS

filesize&=30000& 'length of
sample in bytes
chan=0 'audio channel
'(0-3)
reg&=(&Hdff*4096)+(16*chan)
'hardware regs base address
speed=340 'speed of
'sample
vol=63 'volume of
'sample (0-63)

'allocate memory for sample data
samem&=Allocmem&(filesize&+32,65537&)

IF samem&=0 THEN BEEP:PRINT "NOT ENOUGH
MEMORY!!":STOP

s$="sample"+CHR$(0) 'name of sample
file
fh&=xOpen&(SADD(s$),1005&) 'open file
IF fh&=0 THEN BEEP:PRINT "CAN'T FIND
FILE!!":GOTO frmem

rlen&=xRead&(fh&,samem&,filesize&)
'read in file
IF rlen&=-1 THEN BEEP:PRINT "ERROR READING
FILE!!":GOTO closefile

'the sample data is now in memory ready to be
'played

POKEL reg&+160,samem& 'location of
'sample data
POKEW reg&+164,filesize&/2 'size of sample
'in words
POKEW reg&+166,speed 'speed of
'sample
POKEW reg&+168,vol 'volume of
'sample (0-63)
POKEW reg&+150,(&H8200+(chan^2))
'enable audio DMA

POKEL reg&+160,(samem&+filesize&) 'quiet
sample
POKEW reg&+164,2

Closefile:
   CALL xClose&(fh&)
frmem:
   CALL fremem&(samem&,filesize&+32)
END
```

Listing IV

```
'Opening a borderless and gadgetless windy.
'This routine assumes that the window is
'the same size as the screen.

WINDOW 1,,,0,1
'produce a full size gadgetless window

LIBRARY "graphics.library"
scrn&=PEEKL(WINDOW(7)+46)
bitl&=PEEKL(scrn&+192)
x=PEEKW(scrn&+12)
y=PEEKW(scrn&+14)
size&=(x*y)/8
CALL bltclear&(bitl&,size&,0)
```

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Pack of tunes, please

MUSIC editors on the Amiga are far from uncommon. By rummaging around in the PD world you will soon pick up at least half a dozen utilities for generating tunes. Most are user-aggressive and won't work on anything other than an A500, period. Mega frustrating.

It means there is always room for a commercial package which provides the goods *and* comes with a manual that makes sense.

Enter Dan Lennard and his program, Quartet. Dan is a bit of a hacker at heart, and anyone who has used a SoundTracker clone will immediately feel at home. Scrap the pull-down menus guys, let's have lots of little grey buttons.

What ardent 'tracker fans will find a surprise is the hard disk support, sensible saving and loading routines and – my goodness! – the in-built sample editor.

Gone also are the vertical lists of numbers. They have been replaced with horizontal lists of numbers on a musical stave. It sounds bad, but you soon get used to it. Not what you would call manuscript quality output, but most computer musicians wouldn't know a crotchet from a quaver anyway.

Adding to the hacker-type feel is the animated copper bar display. For those who suffer from motion sickness, the scrolling gold bars can, thankfully, be switched off.

Where things begin to get fun, and where the price tag starts to be earned, is with the MIDI support. Cheap music editors which support MIDI are few and far between. Making use of that Casio keyboard you promised yourself you would learn to play used to be a case of spending quite a bit on a package like MusicX.

Quartet is a music package for the would-be demo writer. If you can write code, then you'll easily merge the music play source code into your own programs. The play routine is triggered from the vertical blanking routine, just in case you're interested.

If you can't code, you can follow the instructions in the well-written manual to produce a demo disk complete with picture which will start on boot up.

It is the ideal sequencer package to complement Microdeal's excellent little sampler (reviewed in *Amiga Computing* May 1990). Everyone – from programming novice to professional games musician – should find Quartet useful for something.

Quartet costs £49.95 from Microdeal (0726 68020).

John Kennedy



Quartet comes with the source code for its play routine to enable you to include compositions in your own programs



A long time ago, in a galaxy far away... Just one of Deep Sky's scanned images

Reach for the stars

IT wasn't long after I reviewed the astronomy package Distant Suns (*Amiga Computing* June 1990) that the expansion disks plopped on to my desk complete with a "meeemo" from those nice people at Virtual Realities Laboratories, Inc.

It turns out that there are no less than three ways of improving your existing Suns set up, all at quite reasonable prices.

First off is the Yale Bright Star catalogue. This disk will instantly increase the number of stars on the original disk (2,200 - a lot) to the entire Yale catalogue (9,100 - a whole lot more).

This means you can now observe on-screen about 3,000 more stars than you could see with the naked eye on a clear night. In fact, *all* stars with a magnitude of 6.75 or brighter can be studied simply by swapping the disk with the original. This disk is £14.95.

For £19.95 you can upgrade with the Skymap disks. Two disks contain the brightest 20,000 stars from the official NASA star catalogue. All stars of magnitude 7.25 are listed, and as a result you will need about 1.5 Mb of memory to use the disk properly.

As you can imagine, having so many stars in use will slow the drawing routines down a fraction. Serious users will say "So what?", and continue to be amazed.

The 20,000 stars include those on the Yale disk, so you will want either of the above expansions – not both.

My favourite disk, which costs £24.95 is called Deep Sky Objects. If you have ever spent a hour with a small telescope trying to find the Andromeda galaxy then you'll love it.

Just click on the Messier or NGC object and up pops an info window and a digitised picture. All but 10 M-objects and more than 100 of the New General Catalogue entries are included. The images are black and white – the way nature intended – so don't expect the false colour long exposure images as printed in glossy stargazing books.

Distant Suns emulates what you would see with a real telescope and a real universe, nothing more. This made it a superb package, both for educational and home use. The expansion disks make it even better.

The original program, Distant Suns, is available from Centresoft (021 3563388) for £49.95. The expansion disks are available from HB Marketing (0753 68600).

John Kennedy

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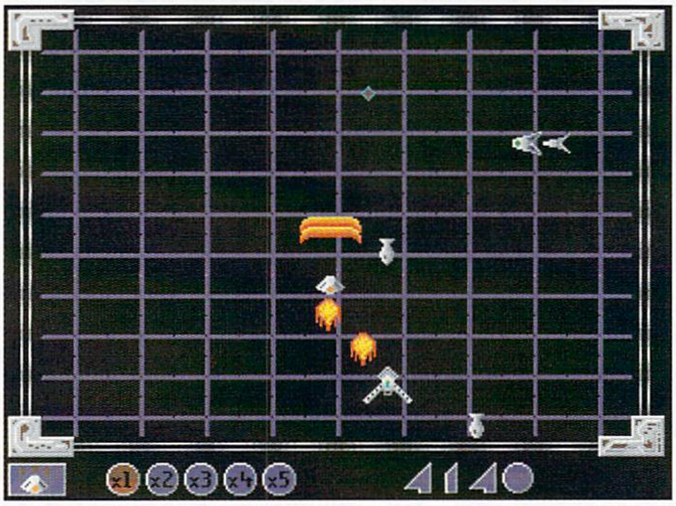
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Saving the universe can be fun (ouch)



IN a hundred years' time when the historians are writing the chapter entitled "Computer leisure activities", the name of Jeff Minter will crop up several times.

This afghan-clad Floyd fan almost single handedly invented computer games on the Vic20, with such classics as *Grid Runner* and *Attack of the Mutant Camels*.

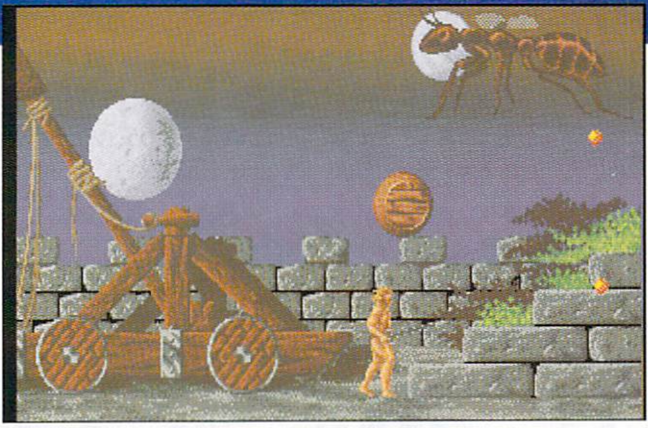
Now history repeats itself as *Super Grid Runner* becomes available on an Amiga near you. Try bartering two joss sticks and a llama for a copy at your local relaxed software outlet. Alternatively, offer your High Street computer shop £10.95 and they may have one on hand.

QUICK COMPO

JUST to prove what nice people we are at *Amiga Computing*, we have decided to give away some rather nifty joysticks courtesy of Spectravideo.

To win either the Quickjoy I, the Quickjoy II or the Quickjoy III, just write into the usual address with your thoughts on where the name "joystick" came from. Best three entries win the hardware, so start thinking.

Like totally unreal, man



ALTERNATING between a 2D graphics adventure and a 3D blaster, Ubisoft's latest release is completely unreal. That is, I mean it's *Unreal*.

It combines both types of game elements into a three disk epic with romantic leanings, featuring everyone's favourite mythical reptiles: Dragons.

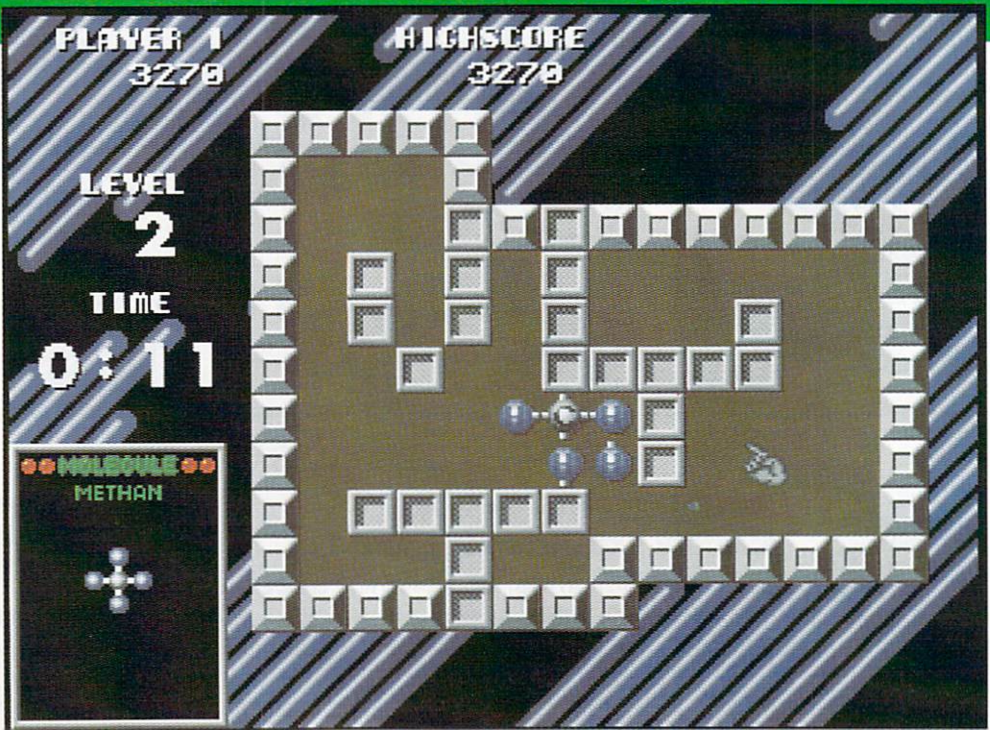
Admittedly the romantic part is nothing more than a plot device to enable you to kill lots of endangered species without feeling guilty, but it's the thought that counts.

The 3D sections feature some of the fastest graphics that the *Amiga Computing* team have seen for a long time. What makes them stand out is the detail – no large blocky bits as objects get closer.

The horizontally scrolling scenes have the same attention shown to graphics and sound, with some fiendish tricks to boot.

Unreal will really be on sale sometime this very month.

Molecular magic



ORGANIC chemistry was never like this at school. Why spend all that time in the lab trying to make ethyl alcohol when you can create it from scratch from the privacy of your own Amiga?

As Thalion states, simple concepts often lead to horribly addictive gameplay, and you can't get much simpler than *Atomix*.

Your aim is to construct various organic molecules from their component atoms. No need for catalysts or fractional distillation this time, just slide the little atomic balls around until the glueons cause them to stick together.

It's all a sort of cross between a sliding block puzzle and a cold fusion experiment. Be at the forefront of nuclear physics for £19.99.

All the latest news on the games software scene

Coktel cabinet

TOMAHAWK, the 16 bit label of Coktel Vision, have released four of their adventures in one compilation. With an almost unheard of burst of imagination, they have named the collection: *Adventures*.

The games which form the collection are *Emanuelle* (a bit naughty), *African Raiders* (strictly speaking not an adventure), *20,000 Leagues Under the Sea* (nice graphics) and *Freedom* (about the abolition of slavery – would go down well in this office).

At an adventurous price of £24.99 this means each game costs just over six earth pounds, which can't be bad.



REVIEWED THIS MONTH

96% Midwinter
86% Man Hunter II
84% Castle Master
82% Dragon Force
82% Sword of Aragon
81% Jumping Jackson
77% Cyberball
77% Italy '90
75% Blue Angels
73% Theme Park Mystery
50% Dan Dare III
50% Time Soldier

Steve Davis results

THERE was a wonderful response to the snooker table competition, so much so that poor Tym almost strained himself trying to keep both feet on the floor as he rummaged around inside the magic bin liner.

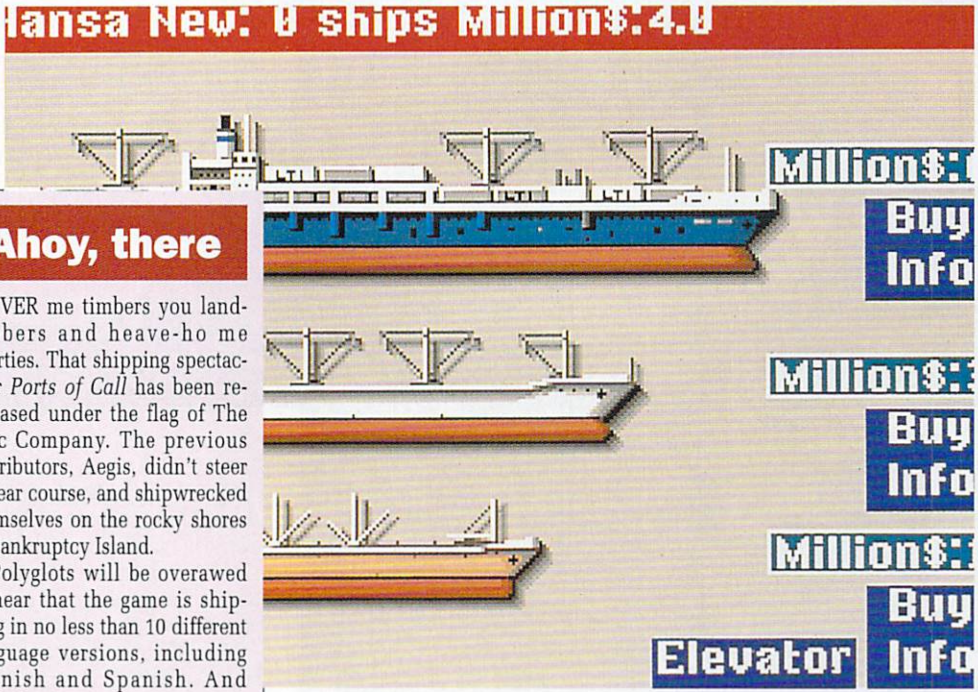
Eventually he picked out the following lucky entrants: The overall winner was **Peter Horsfield** from **Linconshire**. The runners- up, who each receive a cue signed by the great man himself, were: **S.Gardner** from **Birmingham**, **Jamie Wheeldon** from **Burton-on-Trent**, **P. Davis** (any relation we wonder?) from **Upper Edmonton**, **C.B. Simcoe** from **Kettering** and **Herman Sullivan** from **Endfield**.

Congratulations fellows, the prizes are on their way.

Ahoy, there

SHIVER me timbers you landlubbers and heave-ho me hearties. That shipping spectacular *Ports of Call* has been re-released under the flag of The Disc Company. The previous distributors, Aegis, didn't steer a clear course, and shipwrecked themselves on the rocky shores of Bankruptcy Island.

Polyglots will be overawed to hear that the game is shipping in no less than 10 different language versions, including Finnish and Spanish. And English, of course.



A few slick operators



Drag on and on

WHAT is promised to be the ultimate in rôle playing games is soon to be released by Thalion.

In the mythical world of *Dragonflight*, all knowledge of magic has been lost, and it's up to you to re-discover it.

As per usual, Dragons are the key to the problem for only they can help re-educate man and elven folk in the old arts.

You'll have to chat with the locals (and probably kill them), explore dungeons, cities and travel across the seas to strange islands, where there are even more locals, dungeons and cities.

Of course, expect your fair share of puzzles, spells and potions as you control your band of merry adventures.

The three year development time is reflected in the £29.99 price tag, although if the gameplay is anything as good as promised, this may be a bargain.

Udo Fischer (in blood red robes) and Erik Simon (in slime green) discuss their tactics for world domination

MIDWINTER

When Hell freezes over...

AMIGA COMPUTING Supreme





Each member of your team has his or her strengths and weaknesses: It's up to you to make the most of them

HOW will life of earth end? The greenhouse effect? Toxic overload? Ozone layer depletion? War? Nuclear accident? Will human beings destroy their own planet?

Not this time they won't. Fate beat them to it.

As poor old mankind was talking about thinking about possibly considering the option of perhaps maybe doing something to save the world, nature took the matter into her own hands.

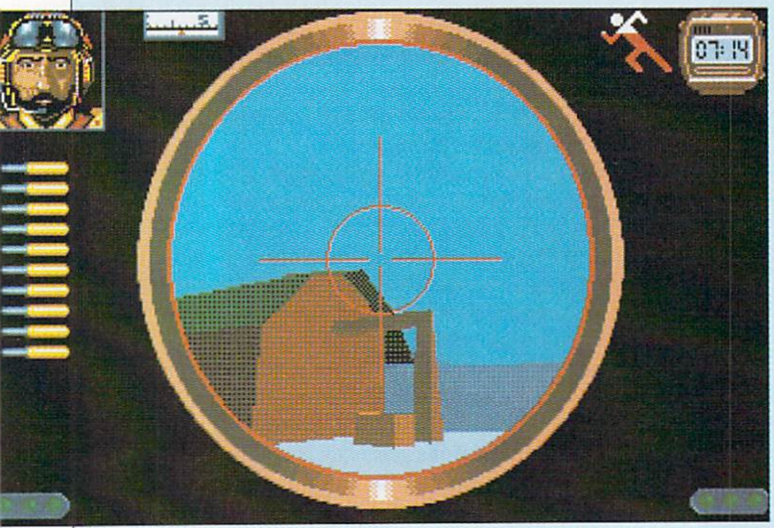
First there was a streak of light in the sky, then the ground shook. The earth had been struck by a giant meteorite. Clouds of debris spread into the atmosphere, blocking out sunlight. Global temperatures plummeted. The climate of entire continents changed. Millions died.

For those who survived, for those who travelled towards the equator in search of warmth and food, the world was a very different place. The extinction of one more species took on a new importance when the one in question was Homo Sapiens.

But men knew how to adapt, to change themselves if they couldn't change the planet. Small colonies emerged and stabilised, using the leftover technology to scrape a living from the fragile earth.

One such group established itself on the island known as Midwinter. Taking heat energy from the heart of the planet itself and growing crops using hydroponics, living conditions gradually improved from abysmal to tolerable.

The island was large and – rela-



After skiing several miles across country, what better way is there to relax than with a bit of high-velocity sniping.



tively speaking – successful. The need for a policing force was minimal, but it was there. And not everyone agreed with who was running it.

One such man was General Masters. He saw Midwinter, and he wanted it for himself. So he decided to take it.

Your name? Well, you're John Stark. Your father was one of the first men to set foot on the island, and as head of the island police force, you're not going to stand by and watch the destruction of all he worked for.

You're not alone. There are others who feel the same. If you can convince them of the danger, they'll help.

All have their own strengths and weaknesses. Some can ski well, snipe, hang glide. Some can't. Between you, you have a job to do, 'cos there's no one else to do it. You'll have to guide the actions of each man and woman, turning from one to another as the need arises.

In between planning strategies, you'll need to play special action sequences. The graphics in these stages are constructed from solid polygons, which wouldn't be exceptionally interesting if they weren't light-sourced.

In the world of Midwinter the sun is always over the south east of the island, casting blue shadows over the snowfields. It is possible to navigate your way just by noting the colouration of the landscape.

As you ski from one outpost to another in search of volunteers, objects in the distance are blurred and indistinct. As you get closer they become more substantial.

Shortly after this you either crash right into the darn things or ski around them. Fast and detailed, these sequences do more than just fill time, they're an integral part of the mission.

The playing area is the entire snow covered island of Midwinter. To try and store an internal model of this size directly would be madness. Instead, it is constructed using fractal algorithms to generate a world as detailed as possible with a minimal amount of start data.

Zooming in on the map demonstrates this to great effect – as you get closer and closer the detail expands and improves. Switch the Relief option on and you could be looking at a digitised satellite picture. Very impressive stuff indeed.

There is enough gameplay here to keep you playing for several weeks/several months (delete as the need for sleep deems applicable).

The plot is substantial, with a mini-telephone book of an instruction manual. For the less patient, there is a "get started quick" card which will have you on the piste in no time.

Midwinter is an important advent in computer programming. The Mike Singleton crowd have always produced innovative products, but this time they have surpassed themselves. Never has so much effort been spent on creating a new environment.

It's not a game, it's a virtual reality. Be there.

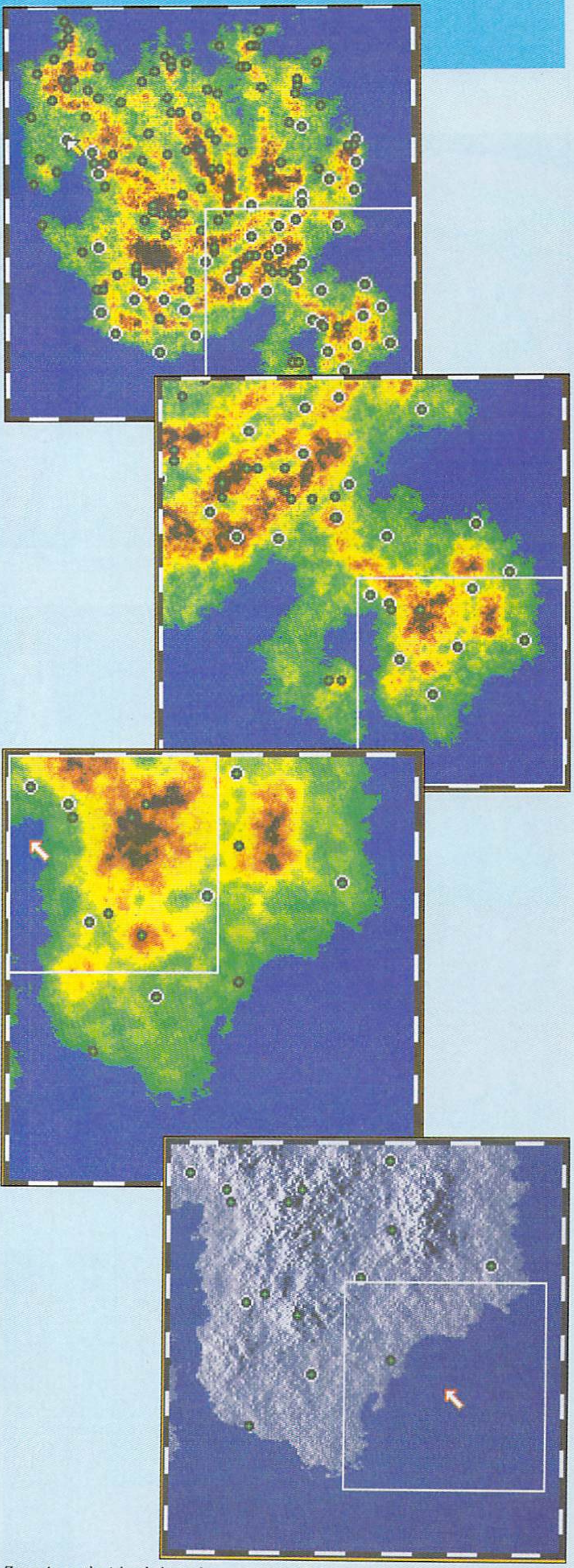
John Kennedy



Midwinter
£29.99
Rainbird

Aura
Graphics
Gameplay
Value

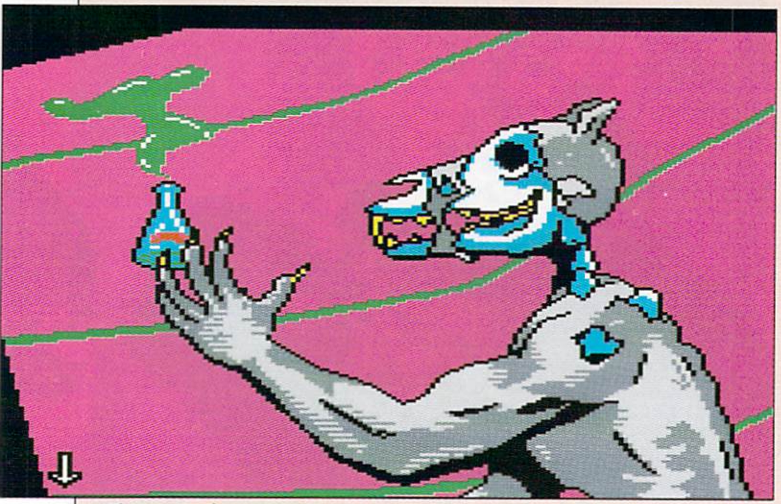
Overall – 96%



Zoom in on the island chain then switch to relief mode to find the lie of the land

MANHUNTER 2

Quis custodiet



This rotting character isn't giving out any more clues but the phial may be useful

THEY came from outer space, from a twin planet system in a distant galaxy that was fast becoming a single planet system. Nasty, creamy-white, with the consistency of Cadbury Chocolate Eggs, the Orbs came in their hordes, looking for a new world.

And like any intelligent alien force, they headed straight for the eastern seaboard of the USA.

New York fell quickly. The humans that survived the holocaust were forced to wear long, brown, hooded robes. The penalty for talking was death.

The Orbs, being armless, built robots to carry out their dasterdly deeds and selected a number of humans, including you, to police the population. These are the Manhunters and they hold the highest position a human can hold under the Orb Alliance.

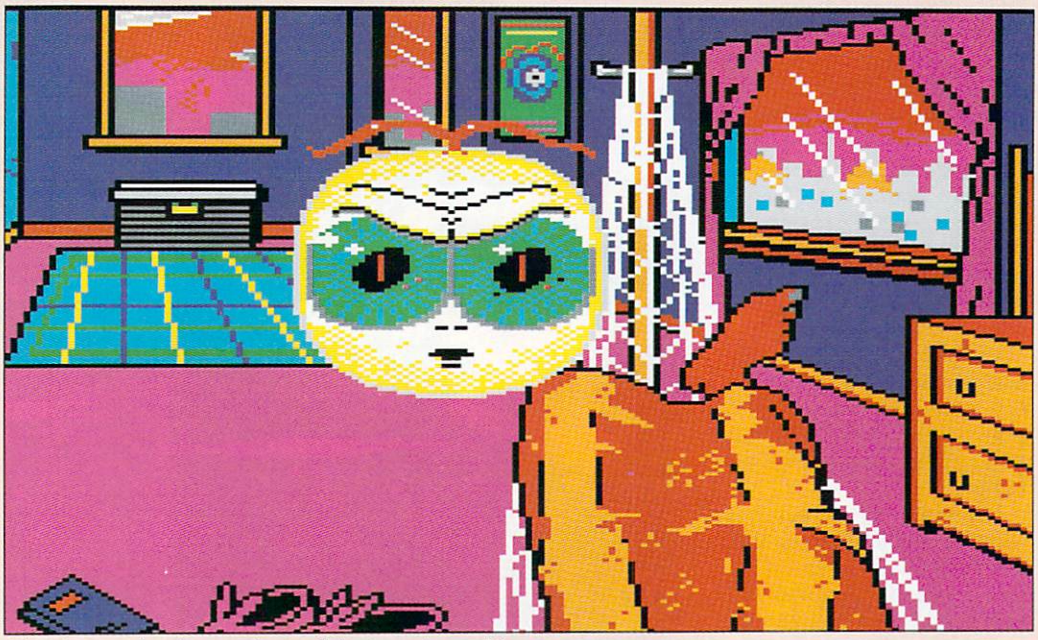
But the Orbs hadn't reckoned on you. Using your high position to move around freely, it took you just three days to destroy the Orb HQ and free the city. It would have been a perfect ending had not a dangerous killer and Orb ally escaped and fled.

That was yesterday. Today you are chasing that killer, Phil Cook, in an alien ship that you can barely fly. Below you is San Francisco, and it's obvious from the devastation that the Orbs have landed here too.

Being unfamiliar with the ship's controls, you crash land and stagger slightly stunned from the wreck. After a few moment to regain your senses, you see that you have landed on top of another Manhunter. Closer investigation reveals his ID card and Manhunter Assignment Device (MAD). With these bare bones you can begin to track down felonous Phil and devise a plan to defeat the Orbs.

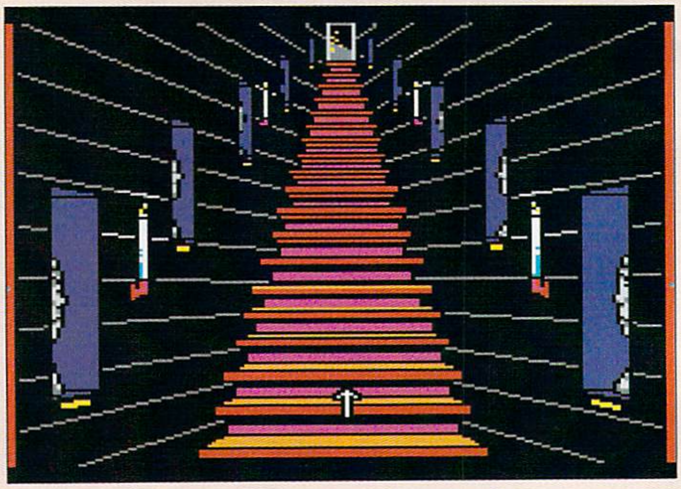
All humans, including Manhunters, have had tracking disks surgically inserted into the backs of their necks. Using the MAD you can link to the Alliance computer and watch recordings of any criminal activity in the city that day. Limited information on all humans currently residing in the city is also available.

Under the guise of the flattened Manhunter, you are authorised to travel to all locations visited by



There is no rest for a busy manhunter. This cute guy is one of the enemy





– SAN FRANCISCO

ipsos custodes?

criminals and all addresses furnished by the database.

By tracking each blip and typing each new name you discover into the MAD computer, you will gain access to all the locations you need to visit in order to complete each day of the adventure.

Clues are everywhere. It's important to track each criminal until he ceases movement, otherwise an important location may be closed to you. Luckily the day's tracking recording can be replayed as many times as you like, so if you seem to be up against a brick wall, use the MAD to make sure you've seen all there is to be seen.

You can't die in MH2. Well, you can, but you get re-incarnated, so making a fatal mistake is not the end of the game. Indeed, there are several occasions in the course of the three days when making a fatal mistake is essential to completing the day's assignment.

Those assignments are real tricky. The first day involves following in the footsteps of the tracked criminals, collecting objects and clues that will be useful over the next two days.

Every day there are a number of arcade sequences to be completed. Each can be set to Easy, Normal or Difficult, but each needs to be completed, sometimes twice, before you can continue on your quest. Only the final one is particularly difficult, so hardened adventurers shouldn't let these arcade sequences put them off buying the game.

Day 2 and Day 3 dawn with the Orbs, who think you are the Manhunter you flattened on arrival in San Francisco, giving you assignments. These commands you must obey, although your real purpose is to continue to collect objects and clues to help you discover the whereabouts of Phil Cook, never forgetting that your ultimate aim is to destroy the Orbs.

The path to success is intricate and devious. Miss one clue and you'll never complete the game. MH2 isn't going to disappoint Sierra On-Line fans, even if the graphics and sound aren't up to Space Quest III standards. And if you bought and enjoyed MH1, then Manhunter 2 – San Francisco is a definite must.

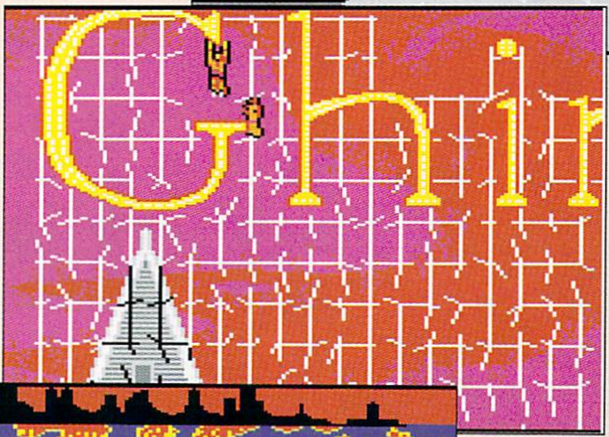
Jeff Walker

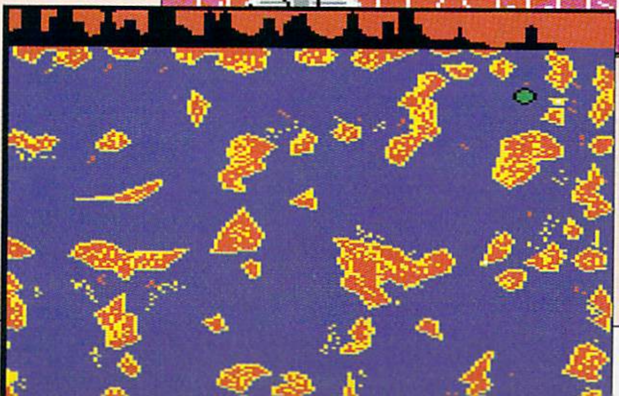






Graphics aren't up to the standard of recent Sierra releases such as Space Quest III but are good enough to keep the fans happy





Manhunter 2
£29.99
Sierra On-Line

Aura	████████████████░
Graphics	████████░░░░░░░░░
Gameplay	█████████████████
Value	█████████████████

Overall – 86%

ORCS by Crom, hundreds of them. Is there no respite to this constant bombardment of vermin? Not content with killing the King of Aladda they must loot and pillage the entire city.

Even now they burn and destroy with mindless vigour, devilish faces bright with glee as they thrust their nature abhorred limbs into everything. By all the gods is there not one here enough of a champion to rid us of this curse?

Bit of a pointed question really. Of course there is someone who's woman (or indeed, man) enough to take on the task – but I have reviews to write, so someone else will have to save the land of Aragon. Some other heroine will have to repel the foe, shore up the city and settle the economy.

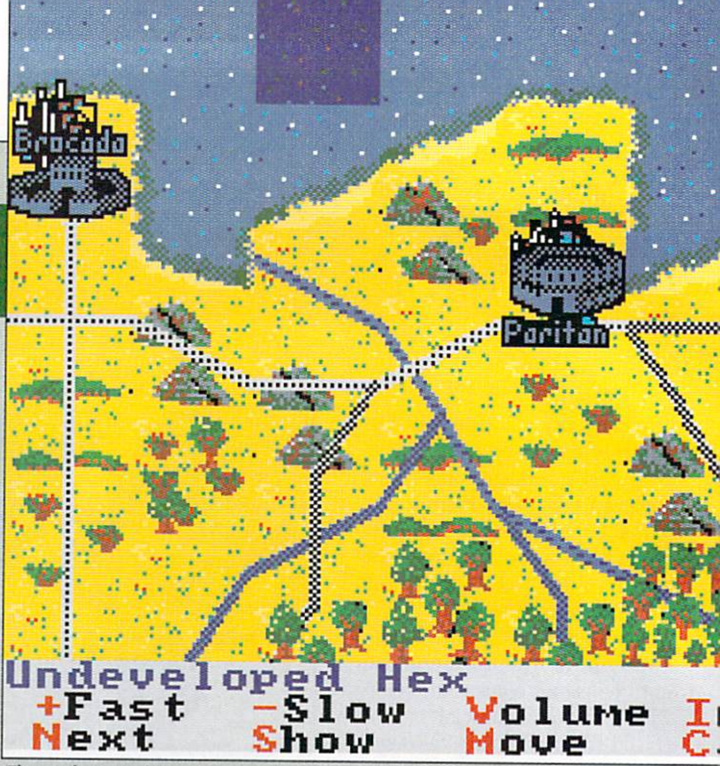
Then of course there's finding the three ancient relics, conquering huge armies of humans, subhumans and demonic hordes from the nether regions of Beelzebub's own satanic pits. Plus, of course, the obligatory dragon-slaying.

The game takes place mostly on the giant bitmapped map of Aragon, a hex landscape lovingly crafted from individual perfectly formed little pixels. Doesn't look too pretty when it starts scrolling about the place though.

The map has been compiled from reports by the foremost cartographers of the time and, as the old favourite goes, they'd be very grateful if you would just fill it in as you go along – a large section (a very important one as it happens) is completely blank.

There are three things a traveller should do when encountering a foreign city in the wilderness. First, go and make a really big cup of tea, Earl Grey I should think, a pint is probably about right. Second, put on some nice music, or Philip Glass if you haven't got any. Thirdly, make sure you have remembered to bring a grotesquely huge and colossal army with you. Now prepare to perspire for a very long time.

The units you have available are fairly typical – cavalry, infantry and artillery, er... I mean archers.

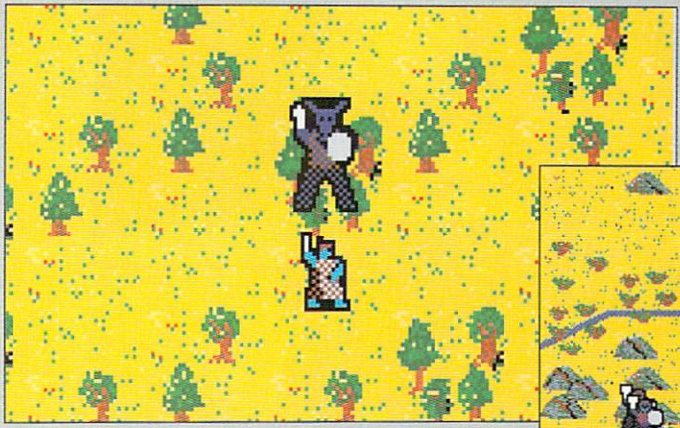


The north coast of Aragon – someday all this will be yours

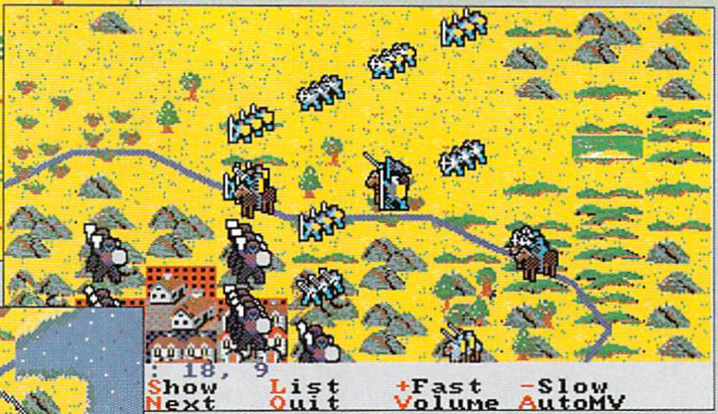
By use of cunning tactics you should be able to prise the hated enemy from even the strongest fortresses. I should leave the individual strategy to yourselves but the wary should note that the foe usually opt for a particular gameplay depending on what type of hateful creatures they are.

Some cities are walkovers but many require a lengthy siege or a very long drawn out battle. If you succeed the spoils of the city are yours. Or more accurately, there are a few thousand people more to burden your flagging economy. To really succeed at this game you need to be a bit of a Stafford-Cripps as well as a Napoleon. Set taxes, develop commerce or let your people starve.

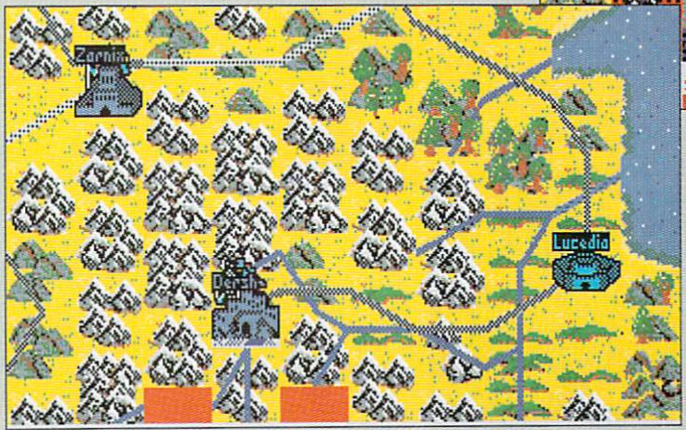
Units are exactingly detailed down to their number, armour, weapons, missiles – even horses. Training and battle experience is taken into account, deciding group characteristics and the type of weapons available.



A Minotaur – just another piece of hero-fodder



Attacking the Dersh – these Titans aren't as tough as they make out





SWORD OF ARAGON

This happy breed of men, this little world



Sword of Aragon
£24.99
SSI

Aura	
Strategy	
Gameplay	
Value	

Overall – 82%

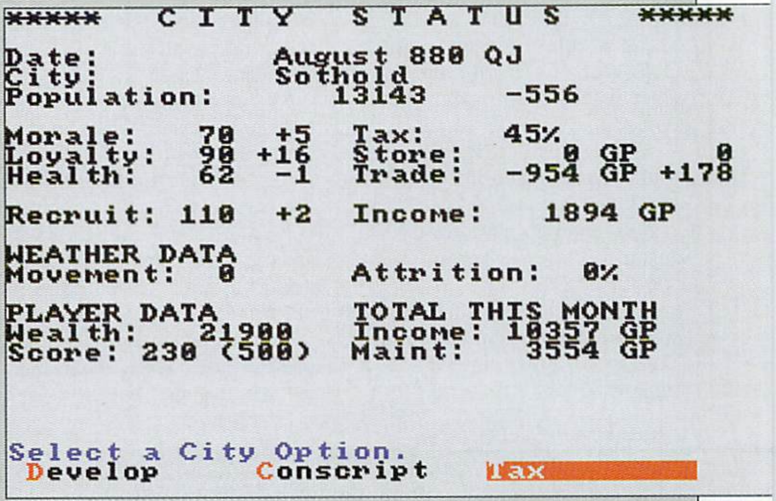
Graphically, apart from some of the nice map detail, it's a bit on the primitive side. Sounds are quite nice but there aren't very many of them (only three effects for combat, it doesn't matter how nice the stereo panning is) and to be quite honest they become a bit of a pain.

Your ultimate quest, to re-unite the kingdom, is well chronicled and a running total of points scored so far (out of 500 for some reason) pops up every month.

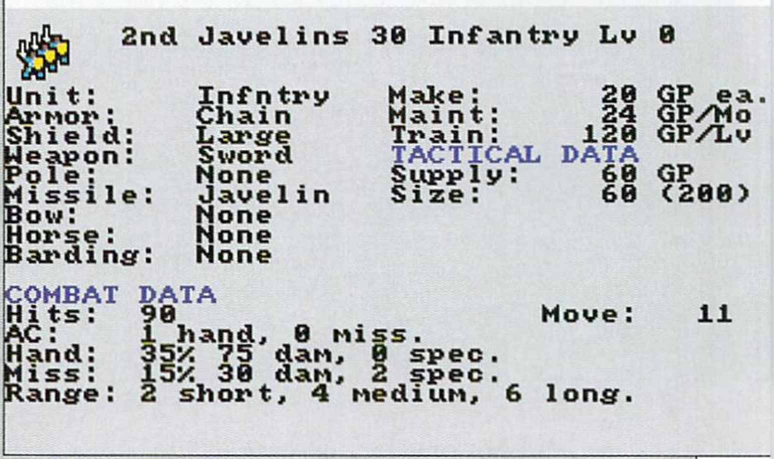
A sound knowledge of military strategy is required unless you have cash to burn on outfitting a completely new army for each succeding campaign. Alas, the tragedy of having a large army – they consume a lot of money just standing around. In order to perpetuate their existence, justify their *raison d'être*, they must loot and burn and plunder.

Overall this is definitely more of a strategy game than a rôle-player and with so many options to totally customise your forces, it's a good one at that.

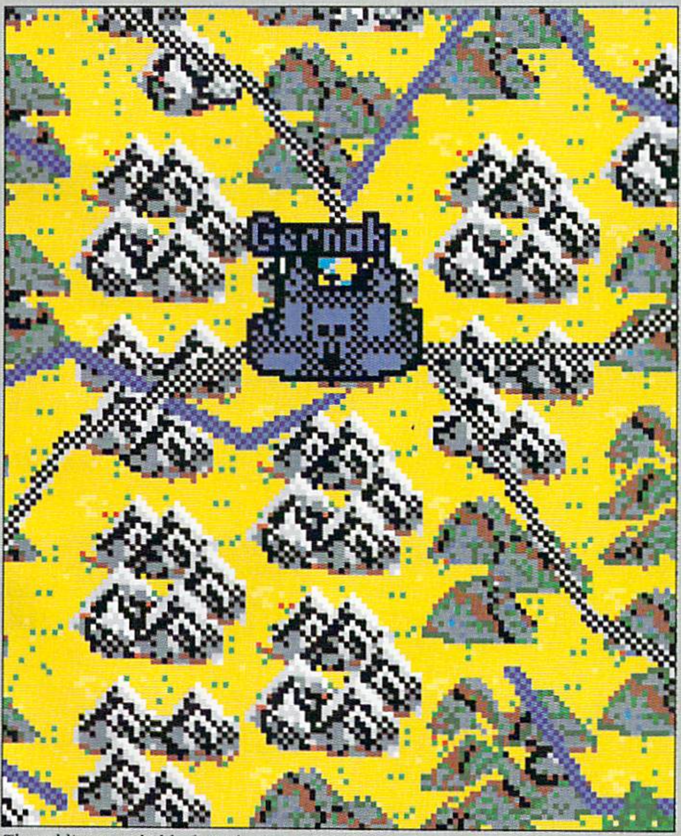
Lucinda Orr



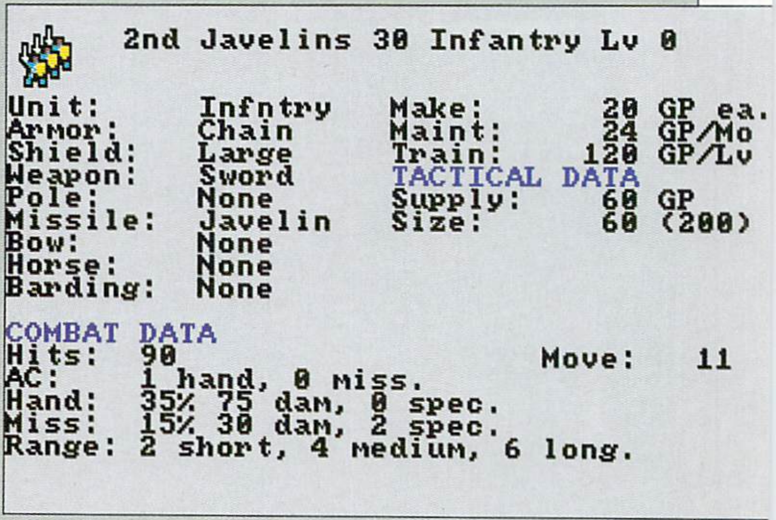
Looks a bit like King doesn't it?



Bias your cities towards an economy that suits their resources



The goblin stronghold – but where exactly is it?



Build a New Model Army – troop design is very flexible

CYBERBALL

Built in the U.S.A.



Choose your play from one of four – but be quick

IN THE future man will live on Mars, drink Guinness and sit in front of the holo-tube of a Wednesday night watching the Cyberball.

This is a ruthless variant of that old favourite, American football. In the future, however, the game is so violent and generally hazardous to life that it is exclusively played by robots.

This is a bit of a bonus really because at the end of a match the losing team gets disintegrated – it would be a bit of a bind for the home team to have to traipse off to the cemetary after a particularly humiliating defeat.

To begin with, one of the six teams of psychotic robots must be selected, two are in the practice league, the other four are pros. The practice league has only the basic plays available; the pro teams are allowed to be a bit more specialist, leaning towards either running or passing plays.

The rules are not quite the same as American football. The team on the offensive must usually cover a full fifty yards with the ball to get a "first down".

Added to that there is the problem of the ball. It's highly explosive. After five plays it becomes critical and detonates, destroying any player who was too close, unless the full distance is completed, in which case the ball will be defused and play starts again with a new bomb.

There is a conversion attempt after a touchdown is scored, but there is no kicking the ball. It may be run in or passed, with more points for footwork than aeronautics, but beware – the ball is automatically set to critical.

Each play is selected on a menu system, with choices made by the joystick. There is a timeout on this selection process which will only leave you a little time to construct your overall strategy – is this more like the real thing?

I don't know, I've never coached a squad of seven sworn to serve the god of mindless destruction.

The offensive plays are restricted to a choice of four running or four passing plays, chosen randomly from the list. This can be a bit annoying when you have a particular strategy in mind – but there's no time to whine and mope about, choose quickly before the timer runs out.

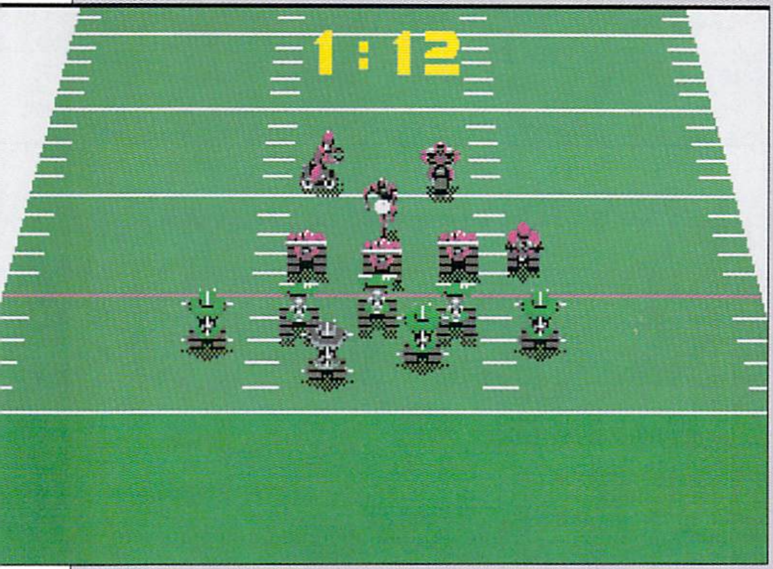
Your bank balance will increase depending on how brilliantly you are playing. A few TDs (that's the abbreviation for Touchdown, not Irish MPs) will pay for a replacement player when they start going wonky.

This is a conversion of the arcade game, and little has been lost in the process – too little perhaps. In the arcade fast action is needed to keep people feeding money in.

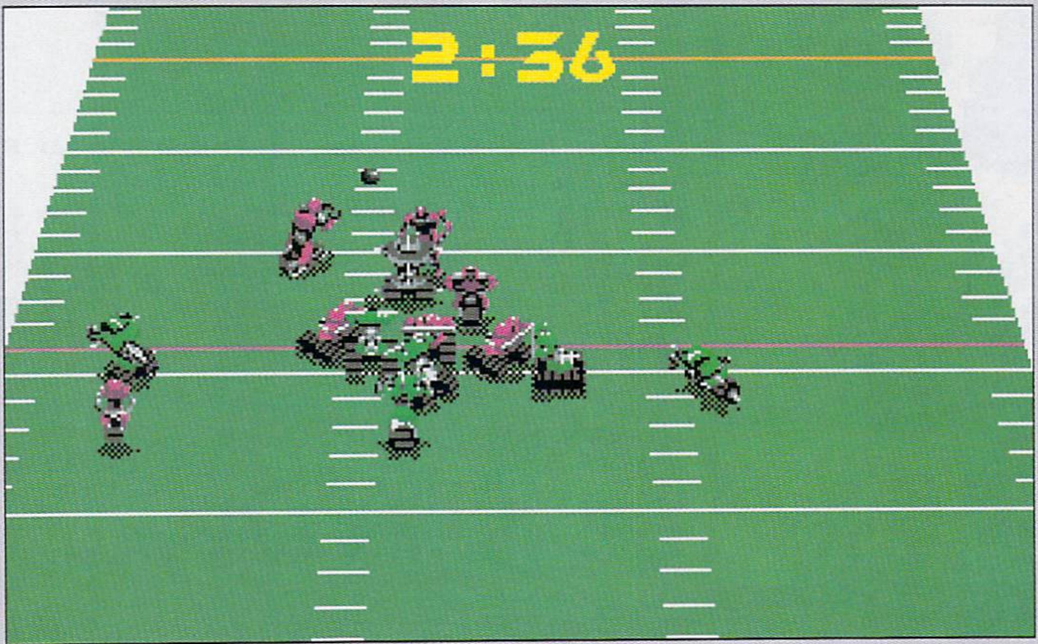
In your own home there is nobody peering over your shoulder, smoking a roll-up and rattling the chains on his/her biking jacket (well, if there is they must be related to you). It is a bit of a disappointment that you are only allowed to complete one game, win or lose.

There may be more arcade than strategy, but that is not necessarily a bad thing, and at least it is faithful to the original coin-op.

Colin Turner



A desperate goal-line defence in the dying minutes of the first period



The Kansas quarterback narrowly escapes a sacking

Cyberball
£19.99
Tengen/Mirrorsoft

Sound

Graphics

Gameplay

Value

Overall – 77%

AMOS – The Creator is like nothing you've ever seen before on the Amiga. Developed by the author of the best-selling STOS, the number one game creation tool for the Atari ST, AMOS stretches the Amiga to its limits. Now for the very first time you can access the awesome power of your computer with bewildering ease.

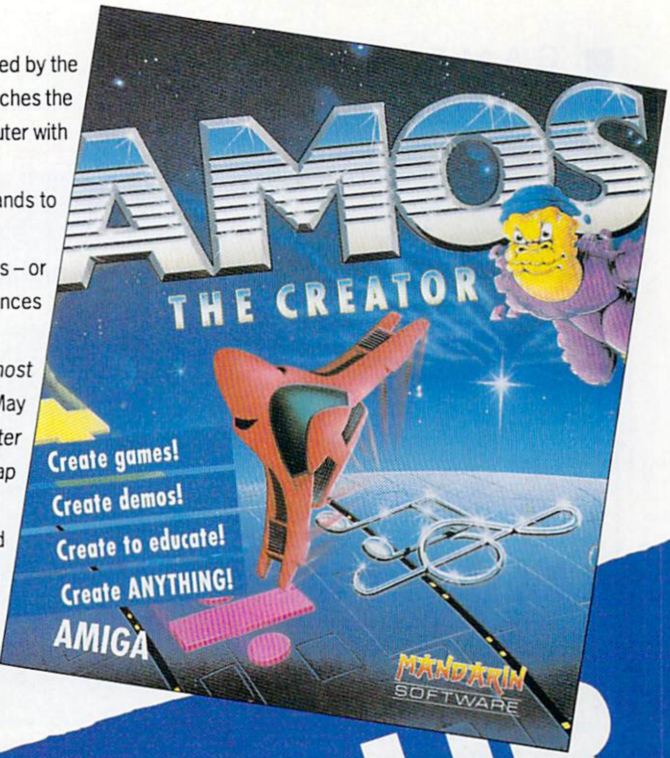
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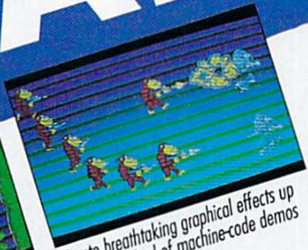



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ITALY 1990

But where is the opening ceremony?

BY THE time you read this the World Cup 1990 will have been played, won and lost. You will know who the new world champions are. At the time of writing I don't, in fact there's still another week to go to the opening game in Italy. Me, I'm getting excited about wall to wall football – you on the other hand have already experienced the event and are probably sick to the the teeth.

However, should you not be repulsed by the thought of football games you may be interested to know how good US Gold's attempt at Italia 90 was compared to the rest.

Unlike many of the so called world cup games, notably the pathetic effort from Virgin, ITALY 1990 scores in the first minute by both giving you the correct world cup competition format and all the teams that have qualified for the competition, along with realistic squads as well. Well done US Gold is what I say, as most other companies obviously couldn't give a toss whether their game was Italia 90 or Cruddy Arcade Game Conversion 90.



England in trouble as Cascarino gets into the box

Each player is rated on five factors, including skill and speed, which are the most important. If your team runs like tortoises you're never going to catch anyone up, and if they have poor skill ratings then they don't stand much chance of tackling and claiming the ball when they do catch up.

Every team in the competition has its players rated this way to give overall scores. This means that that you can play Brazil or Italy or the Argies and stand a good chance of winning the competition, or you can play Cameroon or Egypt (hur, hur, hard luck Scotland) and have a real fight.

That's if you are playing the one player game. If you want to play a friend you can either pick equally skilled teams for a close game, or mismatched teams if one of you happens to better than other.

In the actual competition you can also decide which formation to play, including the rather bizarre 2-3-5 which I would really like to see someone play. Five strikers and only two defenders – blimey, its like Wimbledon on acid.

Down on the pitch you get full sized figures running up and down a vertically scrolling pitch. The scrolling itself is awful, there's no two ways about it. It's seriously jerky. At least the pitch has some detail.

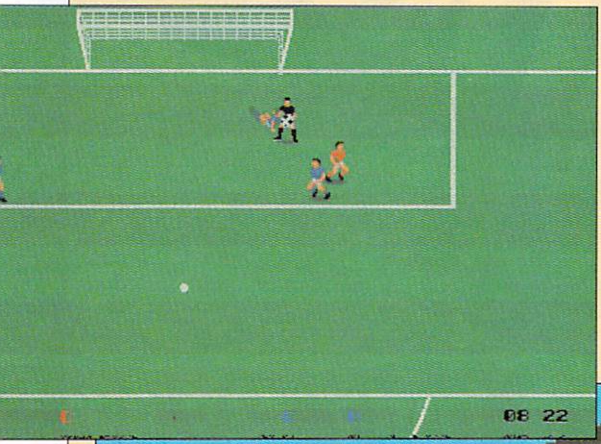
The players kick the ball along the floor for small to medium strength kicks (it all depends on how long you hold down the fire button and in the air for big wellies.

My fave trick is to really whack the ball on a diagonal before the goalkeeper comes into view. The pitch scrolls up and up and the goalie suddenly finds this shot rocketing towards him. Get the angle right and you should score.

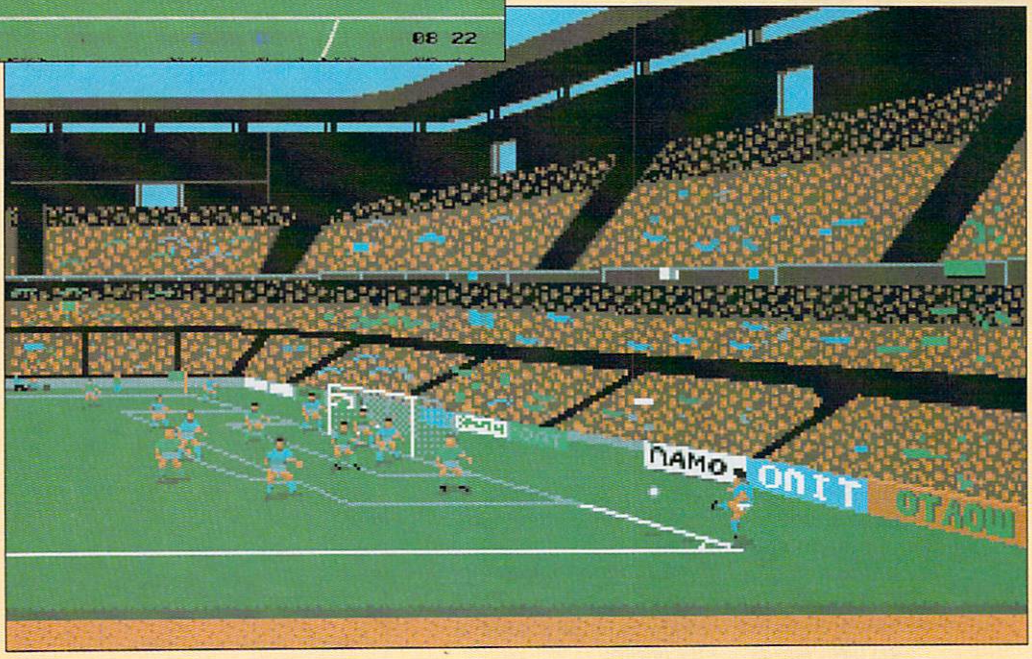
The football gameplay is only average, and it looks distinctly anaemic compared to Kick Off, but then you can introduce that variety from the different capabilities from the different teams.

If you want a fabby footy game then get Kick Off 2, if you want a really classy world cup game that gives you the real competition format and an enjoyable and playable game, then US Gold's ITALY 1990 is a winner.

Duncan Evans







Italy 1990
£19.99
US Gold

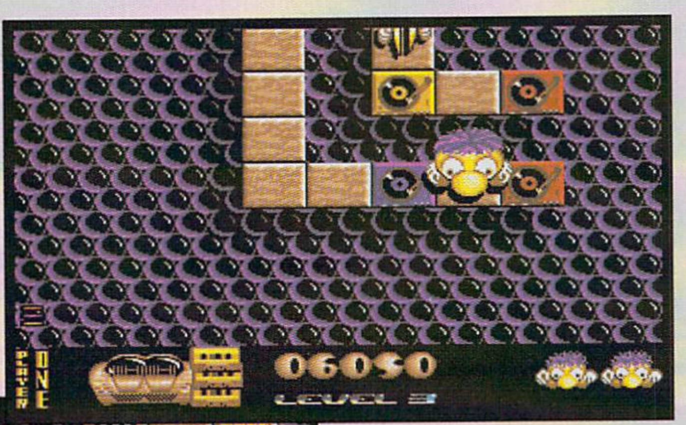
Sound	
Graphics	
Gameplay	
Value	

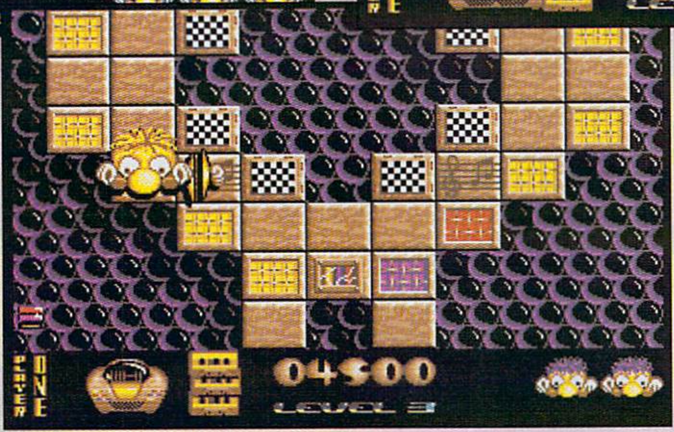
Overall – 77%

JUMPING JACKSON

It's a gas, gas, gas







Jackson better beat it before he gets into a clash with the cymbals

MUSIC has always come a poor second to visuals in computer games. It's always graphics first, then slap in a few bings, bangs, bongs and perhaps a tune if there is one handy.

Rarely do the sonix actually play an important rôle, which is why I was actually quite looking forward to playing this game. I'd seen it on the ST, so I knew the Amiga version was going to be something my over-sized aural receptors would enjoy.

Big sprites are the flavour of the day. Big, colourful bouncy fun-to-be-with, cutely lovable sprites. All bouncing around a typically tile-effect landscape, avoiding baddies and collecting little awards and bonuses. Not quite mind-numbingly original perhaps, but well executed.

It was a surprise to see the scrolling background didn't have some form of parallax effects after the incredible number of hacker-type copper bar displays whizzing around the place. Parallax would make it just a shade more eye-catching.

But never mind, the important part of the game is the ear-catching part. The object is to collect – and I quote here – good old rock 'n roll records. There are several records on each level, and you are awarded one each time you can colour-match a group of tiles. As you pick the disks up, they start spinning on the old Bang & Olufsen.

Thus the tune builds up, starting with the drums, then a bass riff joins in with a bit of a melody – it's actually quite good fun. The music is a groovy, funky blues-scale affair, made from good samples and generally quite pleasant on the ear, assuming you can stay alive (ah, ah, ah, ah, staying alive, staying alive... oops, sorry. Got a bit carried away there) to listen to it. Unfortunately it stops if you get knobbled.

Of course, if it had started playing "Wish You Were Here" or "The Great Gig In The Sky" I would have rushed out and personally bought every copy I could find.

The opening credits music must get a mention because of the brilliant idea of adding an audience clapping and cheering. The first piece of live sampled music?

So I'm sure you get the picture by now: Good, simple gameplay, lots of brainless fun and a darn good musical soundtrack. Whether the young, macho "shoot first, read the manual later" type of game player will be too embarassed to be caught playing it remains to be seen.

Trying desperately to avoid being sexist and failing miserably, it's more of a little sister type game. Which is a pity, because the two sets of 16 levels provide quite a good challenge. I don't mind admitting it. "My name is cough... cough... Duncan Evans and I enjoy playing Jumping Jackson".

John Kennedy

Jumping Jackson
£19.95
Infrogrammes

Sound	
Graphics	
Gameplay	
Value	

Overall – 81%



TIME SOLDIER

Here we go round again

OH no! Gylend, the evil dimension conquering mega beast from planet Dull has captured some of my friends. Guess I'll just have to go and rescue them won't I?

Huh, what do you know - that sly fox Gylend has hidden them back in the depths of time. Oh well, where's the guidebook for Rome. Yup, first stop Primitive Age, and a tussle with Roman legionaires. Ere mate, mind where you're sticking your Pilum!

And some people say computers are elitist and for the intelligentsia. My mother could come up with a better plot than this. So what does it all mean for you, the guy on the other end of the joystick?

Well, what it means is that there are a number of different vertically scrolling levels set in different time periods, offering a variety of foes to waste. At various points during these levels something big and horrible, pops up and has to be dispatched.

Whether you can perform the job of temporal postman, depends on two factors. Factor One : A reasonable measure of joystick waggling ability. Factor Two : Have you got the big boy versions of the rocket and lasers that appear along the way ? If not you ain't got a snowflake in hell's chance.

Ah yes, there's also the energy replenishment icons which are decidedly essential as well. But the rub is this: If you have the top super wobbly version of either laser or rockets then you can blast everything going and pick up all the energy and stuff you like.

If you don't acquire big boy equipment quickly though, you won't last long because you only get one life. Ah well, that's the disadvantage of having a coin-op board manufacturer converting to home computers.

Sadly, Electrocoin has yet to realise that what goes in the fast coinage turnover arcades does not necessarily go in the home market.

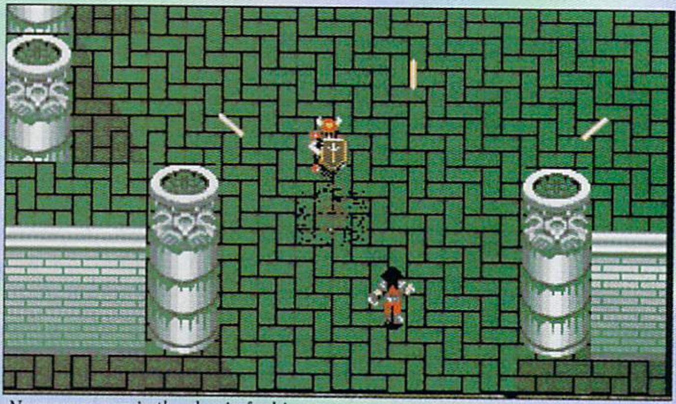
The graphics are all right, there are a lot of people rushing towards you that need killing, the music is total rubbish and the scrolling is quite smooth.

What's wrong is that the individual levels go on and on, and even repeat themselves.

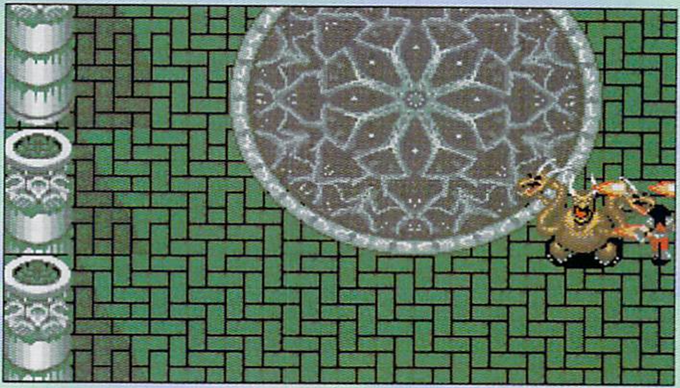
Commando on the Commodore 64 has more colourful graphics, miles better music, and much better gameplay. And that game came out years ago.

Time Soldier is really not good enough at all, and is simply a homage to mediocrity.

Duncan Evans



No more roman in the glomin for him



Three heads are better than one if you're an end-of-level monster

Time Soldier
£19.99
Electrocoin Software

- Graphics
- Sonics
- Playability
- Value

Overall – 50%





MASTER S·O·U·N·D

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★ LOAD	★ SAVE	★ RAW FORMAT	★ IFF FORMAT
★ SCOPE	★ FFT	★ VU METER	★ SEQUENCER

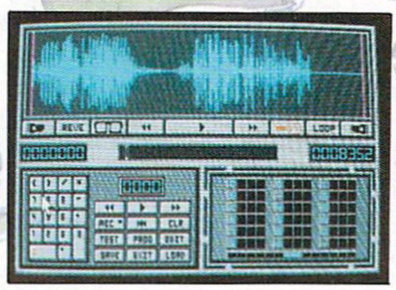
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DRAGON FORCE

One world – it's a battleground

DRAGON Force (Drastic Response Assault Group Operations Network) is a solitaire wargame that puts you in command of a small, special operations force set in the present day, with a variety of missions throughout the world.

There are 14 members in your team and for each mission you command seven of them. During the missions some may be killed, they will not be replaced, so careful man management is paramount. Others may become prisoners of war, although they can be rescued later.

You are given a selection of 12 missions played as a training scenario (so casualties taken will not be real, for example) or you can commit yourself to the real thing.

After mission selection, you receive a short on-screen briefing – time allotted, background and objectives of the assignment. Missions include rescuing hostages, disrupting and destroying an enemy camp and finding a downed helicopter pilot.

Each member of your force has a range of specialities including anti-tank, close combat, demolition, machine-gunner, medic, scout and sharpshooter. They also include a number of abilities or skills – awareness (helps to spot targets), intensity (helps accuracy, sight objectives such as hostages, aids wound healing, etc), guts, vitality (his general well-being), strength and luck. You can change the name and nationality of any member of the squad.

A positive aspect of the mission design is that role-playing aspects link missions together, each active man increasing his personal attributes after a mission and gaining possible promotions.

A detailed weapon selection screen is offered for each member's main load (primary weapon), secondary load (backup), and extra loads such as grenades or additional ammo. Each member has a number of "load points" determining the number and type of weapons carried.

Each of the 20 weapons are rated for ammo, load points,range effects, hit chance and suppression effect. Some of the ratings given in the 36-page manual for each weapon appear to be rather wayward at first glance. And technical areas are not explained properly – deteriorating accuracy due to greater range is not mentioned, for example.

However, I've a feeling that more variables have been programmed into weapon performance than is noted because no noticeable design errors appeared to support the dubious manual figures – each weapon performing roughly as expected.

You start each mission on a look-down map display with differing terrain types which has been integrated with some realistic line-of-sight calculations, your team being assembled at a drop zone.

Up to five orders can be given to each man per turn. They are many and varied including a Move To command, Carry Wounded, Fire At Will (combat includes a good variety of sound effects) and Heal.



More hardware than Robert Dyas – load up with rubber bullets

You can interrupt the play at different levels – until an event occurs or until ordered by the player. The game ends when you are killed off, taken hostage or you call for a chopper to take you out. You can do this at any time.

I thoroughly enjoyed Dragon Force, from Roger Damon, a man respected for his WW2 squad level game Fields of Fire from American software house, Avalon Hill. His pedigree shines through in this Interstel release resulting in a classy (despite the appalling intro music) and challenging game that will keep you glued to your monitor.

I would have liked to have seen a little more variation in mission locations and terrain.

However, maybe we will see this in one of the forthcoming scenario disks. How about some inner city, street fighting missions, Interstel?

Paul Rigby

Dragon Force
£24.99
Interstel

Strategy	
Graphics	
Gameplay	
Value	

Overall – 82%





Tanks, but no ranks – nobody told me the enemy had armour in the area



Adelicate operation, rescuing hostages – good job I brought a few grenades along

THEME PARK MYSTERY

The game commences...

DO YOU know what lectryomancy is ? No neither did I until I played Theme Park Mystery. Even when I did know what lectryomancy, gyromancy and empyromancy meant, thanks to the Theme Park booklet, I was no wiser as to playing the actual game.

I quote: "The game instructions have deliberately been kept to a minimum to force you, the user, to experiment."

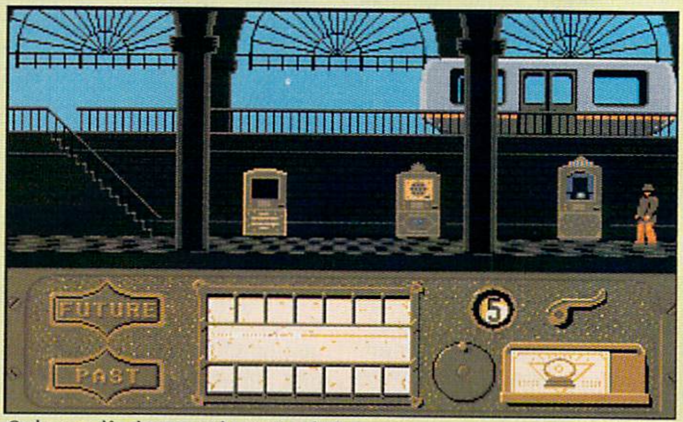
What this invariably means is that if you were given enough instructions to know what the hell you were doing then it wouldn't take too long to complete the game.

Theme Park Mystery falls neatly into this trap, because in each of its carefully prepared segments, Future World, Dragon World, Dream World, and the starting location of Yesterday Land there is a measure of complication that arises from not knowing what any of the various objects therein actually do.

Rather like an adventure game, the object is to repeatedly try to do different things with the same item until a use can be found.

In Theme Park this somewhat repetitive task is made all the more tedious by the fact that there are plenty of red herrings, and that you need one of these objects (found in Dragon Land) to gain entrance to Dream Land. Thus you end up playing and playing again in the platforms and ladders world of Dragon Land.

Before you even get that far you have to solve a small puzzle involving one of the three machines in Yesterday Land. This achieved an image of Zoltan forms in a crystal ball, and hands out the boarding pass for the pandimensional monorail. Yup, step right aboard for a trip, and what a trip it will be.



Grab yourself a demon on the station platform

Until you can acquire the sleeping potion required for access to Dream Land (whoops that's given the game away) you can only visit Dragon Land, which is a distinctly mediocre platforms and ladders game.

Unfortunately you'll be spending quite a lot of time here until you work out how to acquire the artefacts that allow access to the chessboard-like Dream Land, and the killing zone of Future Land. I'd like to say that Theme Park Mystery actually resembles a theme park, but it doesn't. So I can't.

There is quite a lot of depth to the game with regards to things you need to do and collect, so you will be at it for some time, but the telling point is that you'll be doing this acquiring over the same terrain, facing the same obstacles again and again.

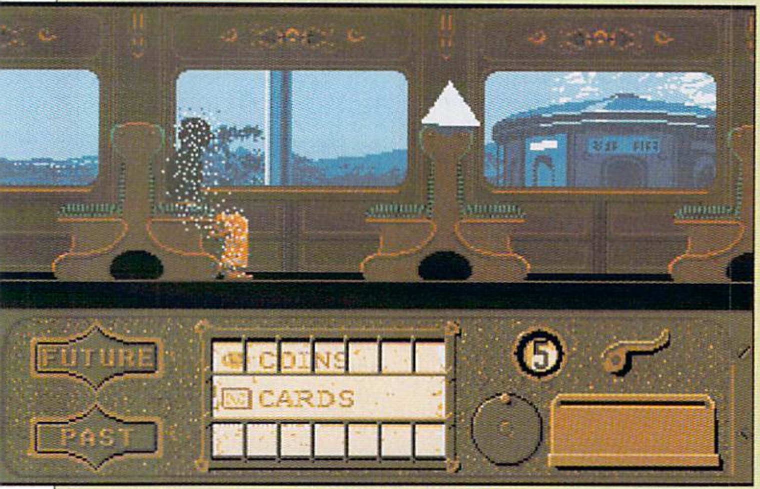
The graphics for Theme Park are indeed a mystery, a mystery why they are so gob-smackingly mediocre that is. The sound effects are equally routine and for a mystery in a theme park the game really does lack graphical imagination.

It also bears a resemblance to Weird Dreams in concept, and though that game left an awful lot to be desired it did at least look different, unusual and interesting.

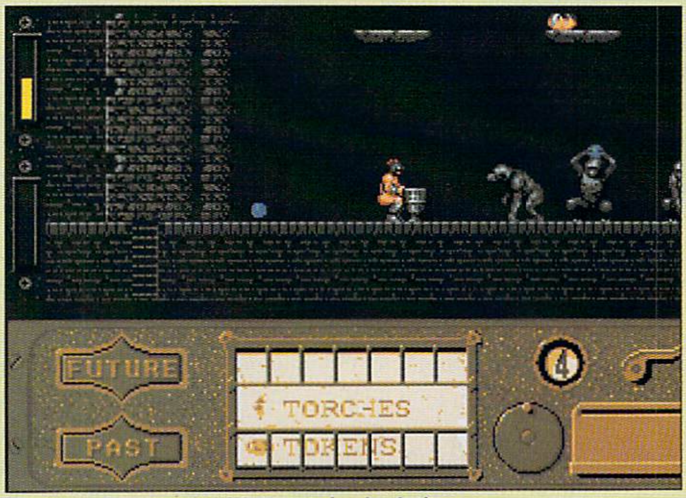
Theme Park Mystery is a reasonable and playable game, once you know what you are doing. If you start off with only the information available in the manual then I can predict plenty of teeth gnashing and hair pulling in store.

If you really want to play this game, which lacks the class to haul it out of the realm of mediocrity, then I'd say wait until some magazine publishes copious hints and maps.

Duncan Evans



The Duncan Evans approved method of fare-dodging

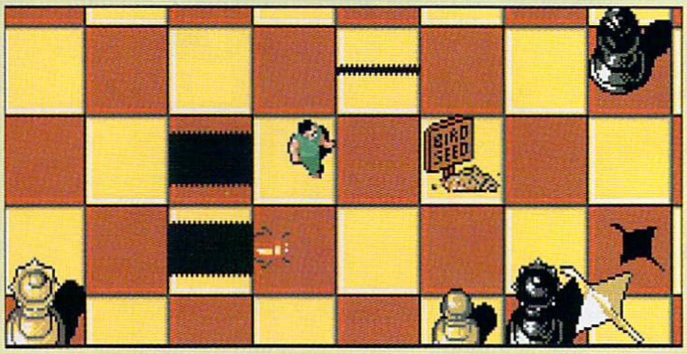


See no evil, hear no evil and the 1987 indoor bowls champ

Theme Park Mystery
£24.99
Mirrorsoft

Strategy
Graphics
Gameplay
Value

Overall – 73%



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BLUE ANGELS

Just an earthbound misfit?

EVERYONE who is at all interested in flying, as well as a few thousand people who aren't I should imagine, must have heard of the Red Arrows – the stunt team who fly around in their nice red planes without crashing into each other (hopefully).

Less of you though may have heard of the Blue Angels, a small group of acrobatic nuns who tour the third world doing a juggling cabaret.

Actually, that was a bit of a porky-pie. In fact the Blue Angels are the US Navy's own display team, who don't actually do much displaying, what with most of the pilots being committed to pre-emptive airstrikes on countries not currently holding a MacDonald's franchise.

Anyway, these guys put on some impressive shows (apparently anyway – I've not seen them personally since they haven't been to Newtownards) and generally hang out in F/A-18s looking cool. Your mission, should you decide blah blah, is to join them.

So you think you're rough enough? So you think you're tough enough? The flight sim will test you to the limits of your flight-envelope, never mind the plane's.

A light touch, quick reactions, a damn good memory and an excellent sense of timing are required if you want to make it to the big time.

The simulator will provide help in the form of displays telling you when and in which direction to adjust these controls. It is definitely necessary to know exactly what sort of maneuvre you are trying to make *beforehand* though, the helper is just there as a gentle reminder should inverted flight at 2g momentarily disorientate you.

A wireframe box path stretches out in front as a further aid to navigation and orientation. The planes are also displayed as wireframes in this mode.

If you like, you can practice a complete airshow in the simulator, helping to eradicate those embarrassing little slips of the controller that sends your F/A-18 straight into the crowds at full throttle.

A practice mode will help you iron out any last minute difficulties. The display will show average error and greatest error expressed as a percentage deviation from the optimal flight path. The flight path itself is modelled in a little cube affair which can rotate, allowing examination of even the weirdest double helixes.

Over 25 actual tried and tested (as in they have been completed successfully at least once) airshow maneuvres are painstakingly rendered into the software. You may chose to fly in a number of positions in each stunt – obviously some positions are far more critical and demanding than others.

One of the annoying things about the game is that if you stray too far from the specified path a break will be ordered and you will have to start again. This is all right during an airshow – I mean, fair enough, you're a hazard to the general populace – but it's a bit out of order when you're only practising.

There are plenty of view modes, giving the opportunity of watching from the ground, from the sky or from the cockpit. The filled polygon stuff isn't impressively fast – in fact I noticed the refresh slowed down perceptibly when flying over the complicated runway, but it's pretty enough to look at.

Now, a flight game where you don't get to shoot anything isn't necessarily all bad, but something has to be done to make it interesting. Although Blue Angels has a nice display and plenty of options and stunts there isn't much to keep up the interest.

It could sell on the accuracy of simulation, the reality of flight, training to become an ace pilot, but of course without an analogue joystick option all this is impossible.

Nice try though.

Green

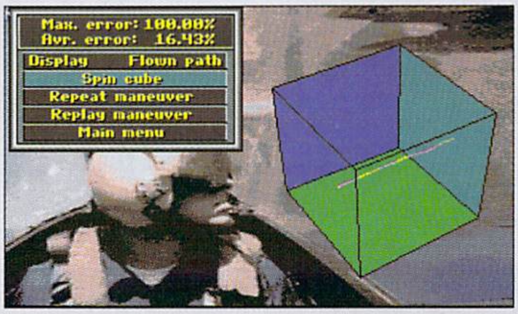
Blue Angels
£24.99
Accolade

Reality	███████░░░
Graphics	████████░░
Gameplay	█████████░
Value	████████░░

Overall – 75%



Blue leader to Blue one...



...check your position...

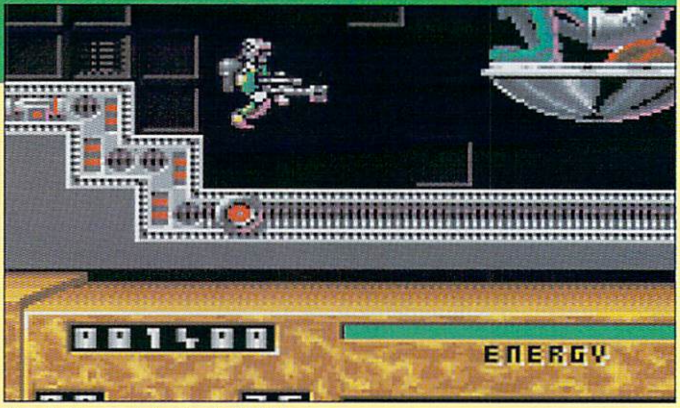

...regroup with squadron...



...and return to simulator for more practice!

DAN DARE III

Who Cares Who Wins?



Dan finds a crack in his windshield

WE NOW salute Colonel Daniel MacGregor Dare, Manchester's most famous fictitious son. Graduate of Cambridge and *summa cum laude* from Harvard and The Roger Moore Eyebrow College, Dare was to have been born in 1967. Does that mean that Dan Dare, epitome of all things English, is the child of a Flower Child ? I think we should be told.

Dan Dare has been shot down by the dastardly Mekon (not to be confused with the very nice man who owns us) again. This isn't anything to do with being shot down over the Mekong Delta, which was in vogue some 20 years ago with USAF pilots. Too true.

For all the Mekon's hyper-intelligence, it isn't too smart when it comes to eradicating its thorn in the flesh numero uno. I mean, if I was the Mekon (which I'm not, since I'm the wrong shade of green) I'd zap first and gloat later. Which only goes to show.

Dan has escaped (surprisingly) and has found himself a spaceship to escape on. Hooray, say you, I've just spent nearly 20 sovs on the world's shortest game. It's a bit more complex than that – the ship requires 50 pounds of high grade rocket fuel.

So off flies the man Dan, after donning a spacesuit which looks suspiciously like a purple and turquoise shellsuit. Tasteless, or what? I mean, just everybody knows that the colours to wear these days are orange and black.

You have to fly around the Mekon's ship collecting bits and pieces to trade for fuel. The actual bargaining is done by hacking the Mekon's computer, which runs Mekos 1.2. A few mutant Treens buzz about trying to stop you just by sheer bloody-mindedness – they drain your energy faster than an Australian soap.

You need a key to get to the next level, and only the Mekon has it. You can get the key by gently but firmly knocking lumps out of The Big Green M with your blaster. The Mekon doesn't appreciate this, and retires hurt to the regeneration chambers, dropping the key en route.

Travelling between levels gives a bad attack of *déjà vu*. Sometimes *déjà vu* can be nice – Proust enjoyed the memory of dunking Madeleine in his tea, though quite what she had to say about it we'll never know.

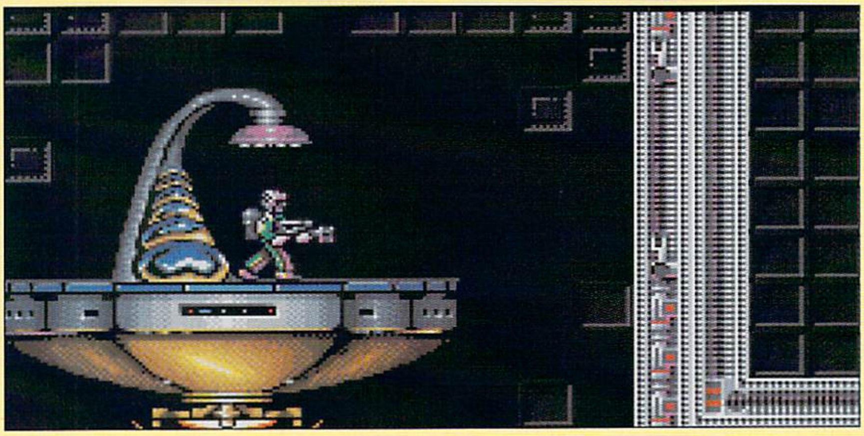
This particular flavour of *déjà vu* isn't quite as tasty. Anyone remember Dark Star on the Spectrum ? Flying between planets on that game required the player to run the gauntlet down a twisty rectangular wormhole in space. Dan Dare III features the same sub-game – the graphics don't flicker, but it's still a convenient way to have all your energy sapped before the next level.

And so it goes on. The early promise of the neat intro sequence with minimally animated frames backed by a samey but reasonable David Whittaker tune goes largely unfulfilled. And no, Mr. Whittaker, Professor Peabody would never have said what she says in your tune.

The gameplay could be a novelty for those who don't remember the spate of arcade adventures that there was in mid-1984. For anyone who does remember them, the gameplay and graphics are a perfect example of the genre. If you switch the tune off, the sound becomes quite authentic for mid 1984 too.

It is a pity that Dan Dare Ltd. hasn't exercised a veto on this game, since it does nothing positive for the image of the good Colonel Dare. I guess the only Dare around this game is Virgin Mastertronic's own, since they dared to release it.

Stewart C. Russell



Dan in mortal combat with the Mekon. I know whose side I'm on

Dan Dare III
£19.99
Virgin Mastertronic

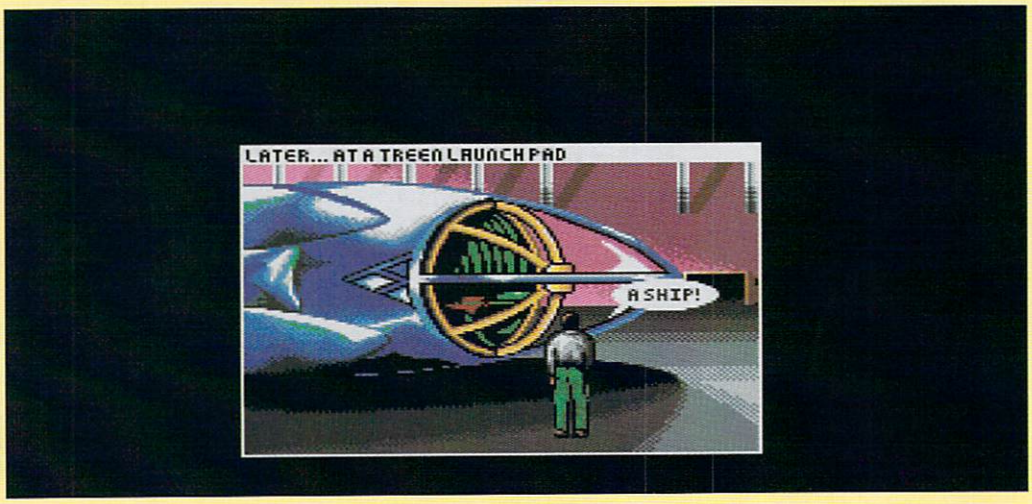
Sound

Graphics

Gameplay

Value

Overall – 50%



Dan stops off for a shower

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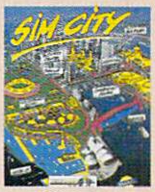
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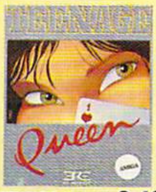
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CASTLE MASTER

Spirited frolics with an iron maiden



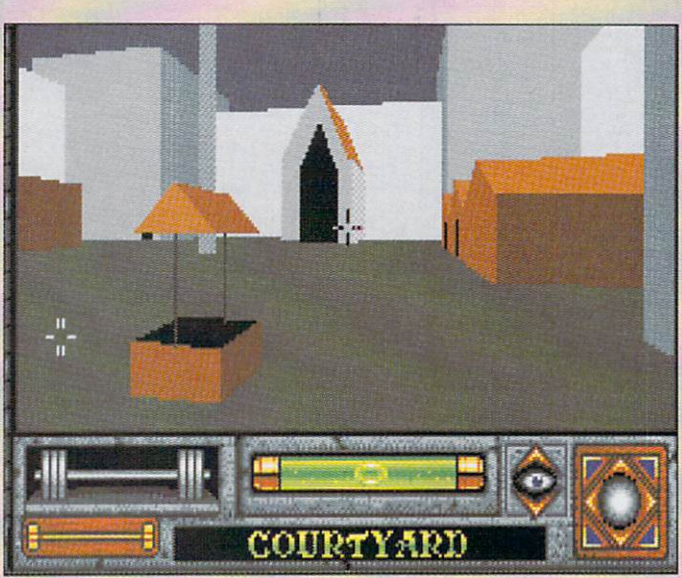
Jaws 3D – but you don't actually move to cross the moat

CASTLES are nice things usually. Well I like them anyway. Giant monuments to a proud history of sieges, imprisonment, death and horrible slaughter. Well, apart from the one in Tandragee that is. It's a crisp factory – makes the best crisps in the galaxy though.

The thing about castles is, according to Domark at least, they are inhabited by nasty spirits and kidnapped relatives. A selection screen at the start allows you to chose to be either a bloke or a blokess, the other one being instantly transported to captivity by pigeon post.

The action is "filmed" in complete super-sexy Freescape, a technique that Incentive, the team that wrote the game, has been perfecting for quite some period of time, with famous titles of the past including Driller and Dark Side (which, unfortunately, was nothing very much to do with Pink Floyd).

The system seems to be running



At the wishing well – I wish I had a key



I'm getting cheesed off with this place



3D monster maze revisited



a little faster in this incarnation. There are also a few nice animation effects – a big step up from the jerky couple of frames seen in previous efforts, though the "spirits" can be tricky to get a bead on.

The screen is split into a viewing area and a nice atmospheric border which doubles as a control panel. Almost all the functions you are likely to need can be found here, the rest are on the pop-up menu activated by clicking the title bar.

Simply clicking the mouse on the relevant arrows will move and turn your character, though I still found that it's a lot easier to use the keyboard. It's nice to have the option though.

An annoying thing about the save game option is that although it works wonderfully well you *must* remember the name you saved the game under – there is no way of getting a directory. A bit of a shame if you have nearly finished but have a memory as bad as, er...mine.

On the puzzle front it is even more demanding than the previous works. There is a particularly cunning bit with a very large object, which has more than just the obvious use as it turns out.

There are a series of objectives, freeing your companion, killing the spirits, collecting treasure, for which other puzzles must be overcome like finding all the keys and pentagrams.

Overall this gives a more open feel to the game, leaning more towards the rôle-playing side of things, allowing exploration and stuff.

The sound effects are really quite good too, though the teeth did grate at the doors opening.

There are a series of nice touches, especially in the dungeon where you can play with an iron maiden or just get "tired and emotional" on the house red. Graphical detail is quite exceptional in places for a game of this type.

If you liked previous Freescape games you're going to love this. If you didn't like previous Incentive stuff, you may find that you like this. If you don't like games at all, you'll probably find you like it anyway.

Lucinda Orr

Castle Master
£19.99
Incentiver/Domark

Sound
Graphics
Gameplay
Value

Overall – 84%

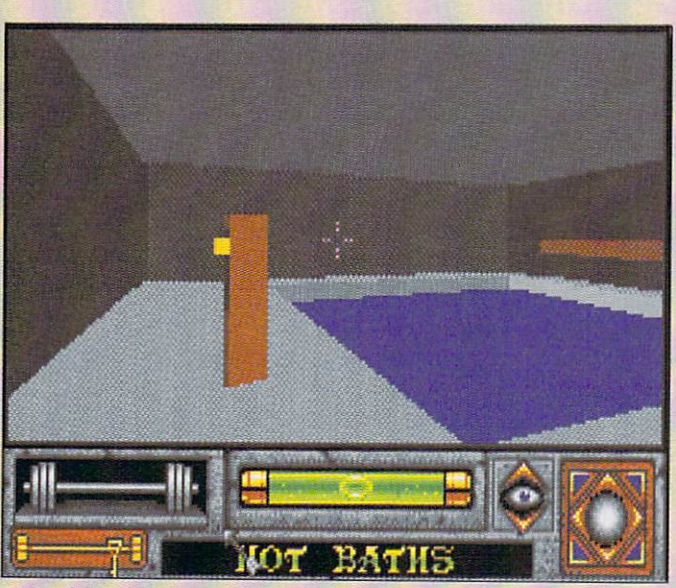


It's a horse – what did you expect to find in the stable?

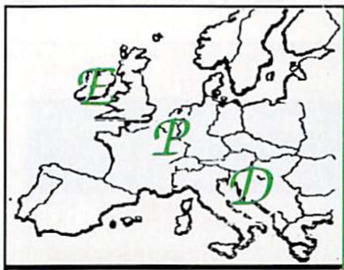


The church roof appeal doesn't seem to be going too well





I never did fancy Bath very much



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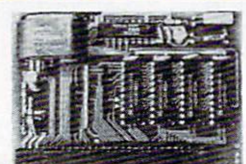
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Jeff Walker presents...

THE DISK



NewLoadWB

THIS little program opens Workbench in a window instead of on the Workbench screen, a concept which will ring a bell with anyone who has been reading about the new Amiga 3000 and Workbench 2.0. Why? Because that's what the 2.0 version of LoadWB does.

Now at this point you may very well be shrugging your shoulders, wondering what difference it makes. Well, let me give you an instance where the Workbench being in a window can be extremely useful.

Let's say you're using a program that opens its window over the entire width of the Workbench screen and won't let you re-size or drag it. Underneath said window on the Workbench are your disk icons. How do you access them? The simple truth is, you can't.

But if your Workbench is sitting happily in a window itself you can click the user-unfriendly, non-resizeable, non-draggable window to the back, which will bring the Workbench window forward and facilitate the clicking of disk icons.

NewLoadWB needs the old LoadWB command to work. Put NewLoadWB in your c: directory and replace the LoadWB entry in your startup- sequence with NewLoadWB. It's as simple as that.

The Workbench window created by NewLoadWB will open to the full width and height of the screen. Use the size gadget to re-size it and the drag bar to move the window to your favourite position.

The source code

THE source code for NewLoadWB has been crunched using the Data option of PowerPacker. If you haven't got this program (it was on the October 1989 cover disk), there is a Decrunch command in the C: directory of this cover disk which will do the job.

The syntax is *Decrunch <source> <destination>*. There are a number of optional extra parameters. Enter *Decrunch* with no parameters to get a summary of them.

If you've booted from the cover disk and have left the AmigaDos window open, use the following line to decrunch the NewLoadWB source code:

```
decrunch
cd010:newloadwb/newloadwb.s
ram:newloadwb.s
```

Once decrunched to ram you can copy newloadwb.s to your regular source code disk.

NEWLOADWB is a freely distributable public domain program but remains Copyright ©1990 A. Svensson.

THE DI

THIS is a fruit machine program. "Arrgh, no," I hear you cry, "not another AmigaBASIC fruit machine program!!" Well yes, but this one's different.

MakeMoney is based on some of the more modern fruit machines. It has four reels, which all spin properly. It has holds, feature words, money trails, nudges and everything you'd expect from a decent fruit machine.

The whole game is controlled by mouse and there are digital samples, a large scrolling screen, gamble facilities and lots of other features which enhance the gameplay. Pressing the up-arrow key will move the screen up so you can see the winning combinations, pressing the down-arrow key will move the screen back down. If you spin four of a kind, the win is double that for spinning three of a kind.

If someone had told me a month ago that you could do this kind of thing in AmigaBASIC without frequent chats to the guru, I'd have fallen off my chair laughing. MakeMoney has forced me to take Amiga Basic a little more seriously. Perhaps you ought to give it a second chance too...?

Out of memory?

MAKEMONEY should run on a 512k machine, but if you have used other programs before running it, or you have extra disk drives and things plugged in, you will possibly get an out of memory message because MakeMoney uses up nearly all of the memory in a vanilla A500, save about 10k. If this happens, switch off your machine, unplug your external devices and try again.

MAKEMONEY was written by Matthew McGowan and is

Make Money

NUDGE
After lighting up the MAKEMONEY word, this special game lets you to nudge reels up or down to, hopefully, get a winning combination. You must click the left mouse button to stop the nudge trail on a position. This is how many nudges you have. You then click the left or right mouse button on the Nudge below the reel you want to nudge. If you run out of nudges before you win you will be returned back to normal play, not winning a single penny.

This collects the money you have won.

This is the fun bit. If you win the gamble you'll progress up the money trail, thus winning more cash. If you lose you will win the amount below the illuminated coin. You can keep going up the trail until you lose.

MIX 'N' MATCH
This special game happens less frequently than nudge. To play, you click the left mouse button which spins the fourth reel (mix), then use the right button to add either two or three of the same fruit (match) giving you a good win.



This word illuminates bit by bit when you spin fruit with numbers on them. If you light up all the letters, you move on to one of the two special games, nudge or mix'n'match.

Coins light up when you win something. The amount you have won stays illuminated, surrounded by a flashing coin above and below it.

Since no one's perfect, you're bound to click the wrong hold sometimes. This button cancels any holds on the reels.

Stops the reel above it spinning when it is clicked. Like the Start button, these will only function when they are flashing.

Click this button to start the reels spinning. Only operates when it flashes.

SK

GMOE

GMOE stands for Gin's Mega Object Editor. The objects referred to are blitter objects (bobs), not sprites, so all output from GMOE is of this type. It is written (by Sean "Gin" Scaplehorn) using the OS routines, so it doesn't run at a blistering pace, as the animate function will show, but it multitasks and isn't limited to chip ram for storing objects.

The major limitation is that GMOE only works in lo-res 32 colours, but then this is the most common mode used.

GMOE's screen doesn't need much explanation. If you've used an Amiga art package you should be able to work out most of it. First, on the left, there is the zoom grid where the objects are actually edited. Press the left mouse button while over the grid and both the real-size view and the zoom window will have a pixel in the current drawing colour added.

The current drawing colour is shown by the box at bottom left, and has a rectangle around it. To choose a new colour click on the one you want, or click on the box showing the current colour and then click on the colour you want anywhere else on the screen.

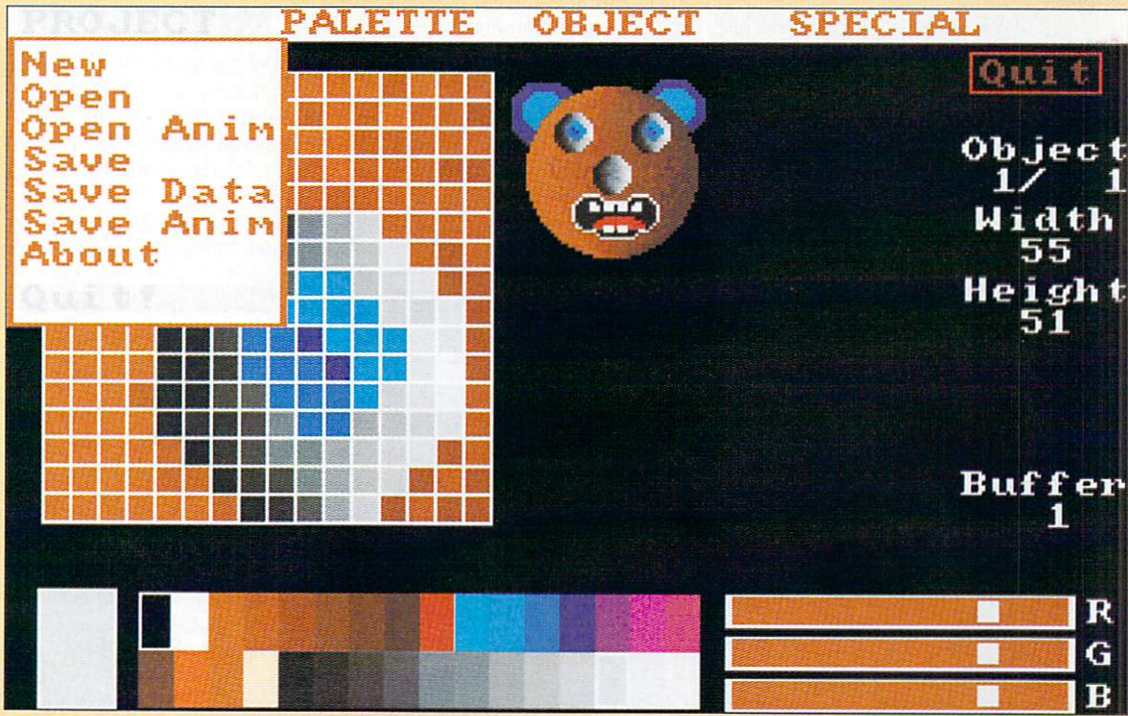
The three slider gadgets at bottom right allow you to change the RGB values of the current colour, thus allowing you to choose from all 4,096 colours.

Along the right-hand edge of the screen are the current settings for object number, width, height and buffer. These will be explained in due course.

The two numbers under Object show the current object number and the total number of objects respectively. Width is, not surprisingly, the width of the object in pixels, and Height is the height in pixels. Buffer stands for the object buffer. This number relates to the number of the object which will be used for the Copy and Animate functions in the Object menu.

Finally there is the Quit gadget, which, believe it or not, quits the program and dumps you back to Workbench or CLI, depending on where you stated the program from.

GMOE: The Project menu



NEW: Not surprisingly, this option clears the current object to blank, setting the width and height of the object to 16.

OPEN: Allows you to load in either an IFF brush file or a GMOE raw file. The IFF option means you can use most painting programs to produce an object, which can then be touched up in GMOE.

Note that HAM, Extra HalfBrite and DPaint III Anim brushes cannot be loaded. However, a brush designed in a med-res or hi-res (640 pixel width) can be loaded, although it will look a bit strange in lo-res. GMOE raw files are just another way of saving objects, only used by this program and are in the format:

```
Width (1 word) Height (1
word) Bitplane 1 (data)
Bitplane 2 (data) Bitplane 3
(data) Bitplane 4 (data)
Bitplane 5 (data)
```

Raw format be more useful than IFF because, in most cases, it takes up less disk space and is easier to incorporate into your own programs.

There is a limitation of size in that objects cannot be larger than 112 x 120 pixels, which is bigger than it sounds.

OPEN ANIM: This allows you to load in a GMOE animation file, saved using Save Anim, which will be described in a moment. The file format is as follows:

```
GMOE (4 bytes)
Number of objects (1 word)
Width of object 1 (1 word)
Height of object 1 (1 word)
Raw data for object 1 Width
of object 2 (1 word) Height
of object 2 (1 word) Raw data
for object 2  :            :
Width of object n (1 word)
Height of object n (1 word)
Raw data for object n
```

All animations will always be loaded at the end of the current stored objects. Note that this option will *not* open IFF Anim files.

SAVE: Saves the current object to disk in either IFF or GMOE raw format. IFF format also saves the palette values, raw format does not.

SAVE DATA: Slightly different to Save and umpteen more times useful to a programmer. This saves the current object out in either Basic DATA statements or assembler DC.W statements.

The current palette is also saved out as data in the form $0RGB, where R, G and B are a hex value relating to the degree of red, green and blue.

SAVE ANIM: Saves an animation sequence. See Open Anim for the file format. To define the range of objects to save, set the object buffer to one end of the range then change the current object (the one in the zoom window) to the other end of the range. Finally, select this option. (See Object/Animate for more details.)

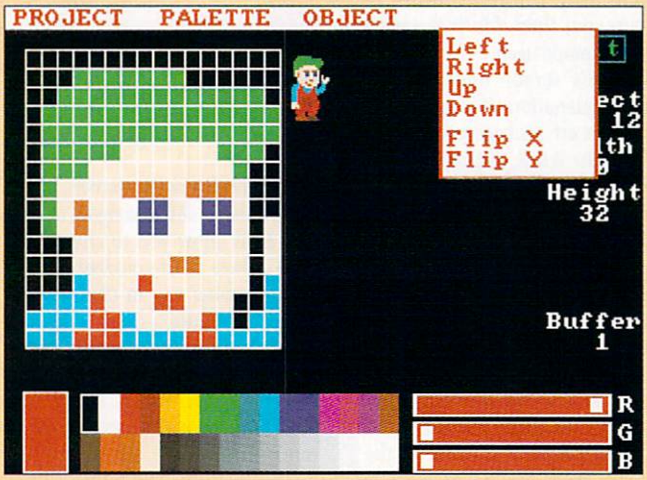
ABOUT: Gives a few details about the program, key controls and stuff like that.

QUIT: Quits, just like the Quit gadget.

THE DI

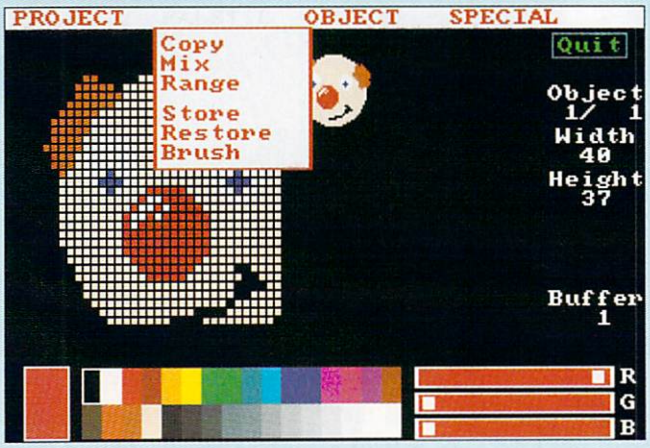
GMOE: The Special menu

LEFT: Moves the whole object one pixel to the left. This only cuts off part of the object if pixels are scrolled off the edge of the largest possible object.
RIGHT: As for Left, but shifts to the right.
UP: As for Left, but, yes, you've guessed it, shifts up.
DOWN: As for Lef... No, I'll you to work it out for yourselves.
FLIP X: Flips the whole object round, effectively giving a mirror image, as if the mirror had been placed to the side of the object vertically.
FLIP Y: As with Flip X, except that the mirror is horizontal.



GMOE: The Palette menu

COPY: Selecting this option lets you copy the current colour into any other colour in the palette. Select the colour you wish to copy from, then select this option. Click on the colour you wish to copy to and 'tis done.
MIX: Similar to copy and works in exactly the same way except the two colours are mixed together to form a new colour.
RANGE: As with programs like DPaint, this option allows you to easily create a range of colours. Select the first colour to be involved, then select Range. Finally, click on the colour at the other end of the range and there you have your colour range.
STORE: This option remembers the current palette settings.
RESTORE: Copies the last stored palette into the current palette. This means you lose the current palette.
BRUSH: Copies the palette from the last IFF brush loaded into the current palette. As with Restore, this means you lose the current palette.



GMOE: The Object menu

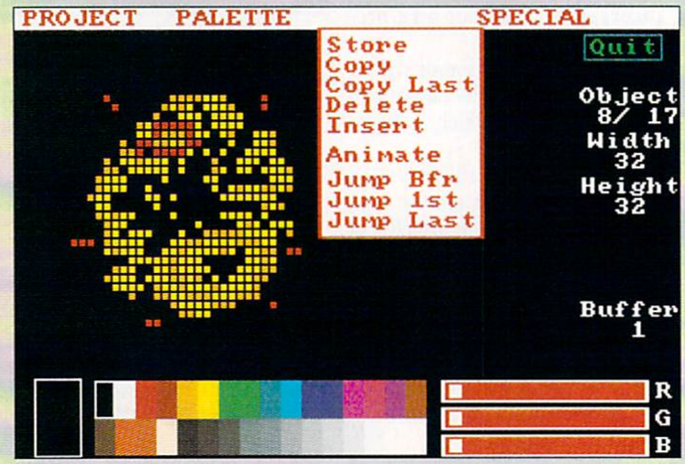
STORE: Remembers the object shown at the moment, and creates a new object. This allows you to store either up to 256 objects, or until memory runs out. Each object stored takes up about 8k, which may sound large, but is the same for all objects, no matter how big or small.

Note that only Store and Copy (below) will work when the current object is also the last object.
COPY: Copies the object from the object buffer (see later) to the current object.
COPY LAST: As for Copy, but this copies the previous object into the current object. Useful when an animation sequence consists of several frames with only minor differences.
DELETE: Deletes the current object. Well, it doesn't actually delete, what it does is to move the current object into the last object position and shifts the following objects all back one place to close up the gap. This will not make any difference if you run out of memory because it doesn't free any up.
INSERT: Shifts the current object and all following ones forward one place, effectively leaving a gap which can then be used to add another frame to an animation.
ANIMATE: Flips through the objects between the current object and the buffer object. Using the plus and minus keys slows down and speeds up the animation, which continues running until the left mouse button is pressed.

Animate will only work with stored objects. If you try to animate using the very last object (that is, when the two numbers under Object on the right of the screen are the same) or you try to animate with the first and last objects the same, animate will not function.

(You can tell when Animate is working because the Zoom grid will disappear.)

You can, however, animate backwards and forwards – that is, with the object buffer number both larger and smaller than the current object. Save Anim uses the same method as Animate for defining the range to save.
JUMP BFR: Stores any changes to the current object and jumps to the object number shown by object buffer.
JUMP 1ST: Similar to Jump Bfr, but jumps to first object.
JUMP LAST: As Jump 1st, but jumps to last object.



GMOE was written by Sean Scaplehorn and is Copyright ©1990 *Amiga Computing*.

Large Zen filled thanks go to: Chris for sounding interested and for beta testing, Sean's Mum and Dad for making it possible, Claire (his sister) for leaving him in peace occasionally, Dan Silva for the astounding Deluxe Paint III, Commodore-Amiga for the bestest lumps of silicon money can buy, Graftgold/Ocean for releasing the best platform game going, HiSoft for the brilliant DevPac 2, Chris again for his improvement suggestions and for alpha testing, Simon for alerting Sean to the Open Anim bug, and Chris's duck for being there.

GMOE: The source code

THE source code for GMOE has been crunched using the Data option of PowerPacker. If you haven't got this program (it was on the October 1989 cover disk), there is a Decrunch command in the C: directory of this cover disk which will do the job.

The syntax is *Decrunch <source> <destination>*. There are a number of optional extra parameters. Enter *Decrunch* with no parameters to get a summary of them.

If you've booted from the cover disk and have left the AmigaDos window open, use the following line to decrunch the GMOE source code:

```
decrunch cd010:reader-contributions/gmoe/gmoe.s ram:gmoe.s
```

Once decrunched to ram you can copy gmoe.s to your regular source code disk.

GMOE: Using the keyboard

F1 – Zoom out.
F2 – Zoom in.
F3 – Toggle grid lines on and off. **F4** – Increase width.
F5 – Decrease width.
F6 – Increase height.
F7 – Decrease height.
F9 – Toggle icons on and off.
F10 – Make current object the object buffer.
HELP – Set new dimensions. This acknowledges width and height changes, trimming the sides of the current object if necessary.
+/- – Alters animation speed (only while animating).
< > – Move back and forth through objects. (If you have just designed an object in the current last object position, you should use Object/Store before moving through the objects.)
ARROW KEYS – Move about within the zoom grid, allowing you to view other parts of the object. Faster movement is possible by using a large zoom magnification, or by using 8, 4, 6 and 2 on the numeric pad to move in 8 pixel steps.

Using GMOE data with AmigaBASIC

LOAD the saved data as per normal, and use the following piece of code to set up a string which can be used with OBJECT.SHAPE:

```
Obj$=MKL$(0)+MKL$(0)+MKL$(depth)+MKL$(width)+MKL$(height)+MKI$(24)
Obj$=Obj$+MKI$(2^depth-1)+MKI$(0)
FOR loop=1 TO size
READ a
b=a AND &hFF00: b=b/256
a=a AND &hFF
Obj$=Obj$+CHR$(b)+CHR$(a)
NEXT loop
```

where *width* is the width of the object, *height* is the height of the object (from the side of the GMOE screen), and *depth* is the number of bitplanes in the screen. Save Data always produces five bitplanes, but this can be shortened by deleting any unnecessary planes. Finally, *size* is the number of data items, and can be worked out as:

```
(width/16)*height*depth
```

The variable *Obj$* can then be used in the OBJECT.SHAPE command to define an object. For example:

```
OBJECT.SHAPE 1,Obj$
```

If you want to use the data with Amiga Basic's PUT command, load the data as normal, then use the following code:

```
DIM array%(size+3)
array%(0)=width
array%(1)=height
array%(2)=depth
FOR loop=1 TO size
READ array%(loop+3)
NEXT loop
```

where *width, height, depth* and *size* are calculated as for the OBJECT commands. The object can then be displayed on the screen with the command:

```
PUT (x,y),array%
```

For more details on PUT and the OBJECT commands consult the AmigaBASIC manual.

The Code Clinic

LIFE. Doesn't it get you down? Couldn't you use a little word of encouragement every now and then? A smiling face? A pat on the back?

Wouldn't it be nice if your Amiga could cheer you up?

You bet it would. And that's just what this month's code clinic program tries to do. The program is called "fortune" and if you copy it on to your normal boot-up disk and call it from the startup-sequence, you will have a wonderful day. Guaranteed. Well, probably.

The program was written by Aj and re-written by Steve Hawtin using NorthC. Examine the startup-sequence on the cover disk to see how to make it appear with every boot you make.

Cheer up. It could be worse.

DTP

WITH the current fad for desktop publishing on the Amiga still going strong, I receive many letters each month asking about sources of clip art.

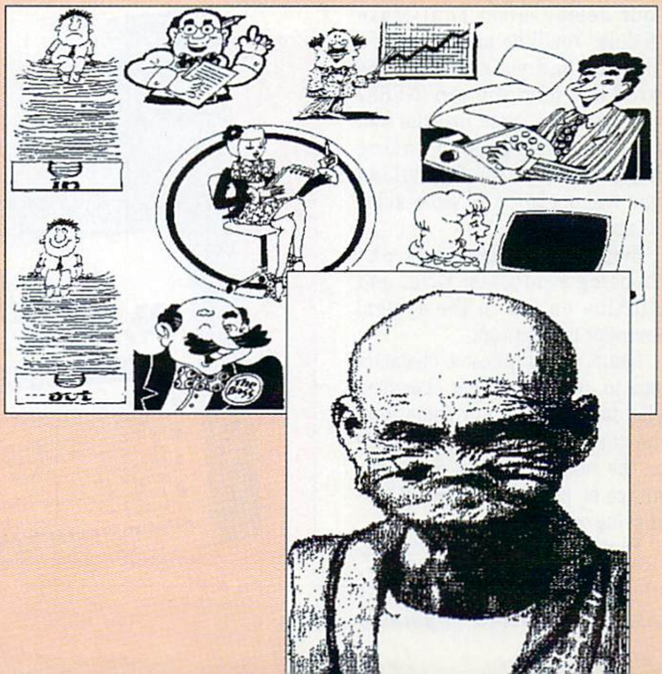
There is a small amount of it in the public domain, but finding it on disk in a pd library can be very difficult indeed. All the clip art I've collected has been downloaded from bulletin boards around the world.

There are basically two kinds of clip art – drawn and scanned. The latter is usually better quality stuff but may have copyright complications if you're producing for profit.

Most commercial clip art is drawn in pen and ink and then scanned into the computer. A lot of it is scanned from magazine cartoons, drawings and photographs and then peddled as original. It might be worth checking the origin of clip art with the supplier before buying. Just so you know where you stand legally.

In the DTP drawer you'll find three files. PrettyFace and OfficeStuff are examples of scanned clip art, one from a photograph, one from drawings. The third file, Amigas, is an example of clip art produced on the Amiga.

More clip art next month, space permitting.



FedUP

ONE potentially tedious task in writing a demo is drawing a font for your scrolly. Out comes DPaint – 26 letters, plus digits, plus punctuation marks... yawn, tedium, backache... 2am and you *still* have to cut 50-odd brushes, all the same size, feed the sods through an IFF converter of some description and then join it all together in the right order to be able to INCBIN into said demo.

Julian Gold got fed up very quickly with this, so he wrote FedUP, a Font Editor for User Programs. Corny title or what!

Based on a C64 font editor, Julian has tried to keep FedUP as simple and Amiga-ish as possible. Double click the icon to run it. You'll get a screen with a grid, some letters and some coloured boxes.

The default grid looks 16 x 16 but is in fact 32 x 32. If you want to see the real grid, select Font/Refine, though when you draw into the grid the fine mesh will be over-written.

To pick a colour, click in a coloured box. The current colour will be highlighted with a rectangle. To adjust the current colour, play with the RGB sliders at bottom right. Julian's found that eight colours is far and away sufficient for his own demo fonts, though if you differ, the source code is provided for your delectation and adjustment.

There are only two menus. The Project menu does the usual open/save/blah/quit operations. The Font menu does interesting things with your letters.

If you hate the colours you've set after playing with the RGB sliders, choose Font/Default Colours to return to the original set.

Once you like your font and decide that this is what will be in your demo, select Font/Make Module. You'll be prompted for a filename and your font will be saved in a form you can INCBIN into the demo. Note that the font you save and load using Project/Save Font and Project/Load Font will not be INCBINable and is not an IFF font.

Erase the current character by choosing Font/Clear Grid, and clicking on OK in the system requester that appears.

Font/Copy duplicates character data to or from another character.. The data will go to or come from the current character, depending on the subitem chosen. Select the source or target character by left-clicking on it.

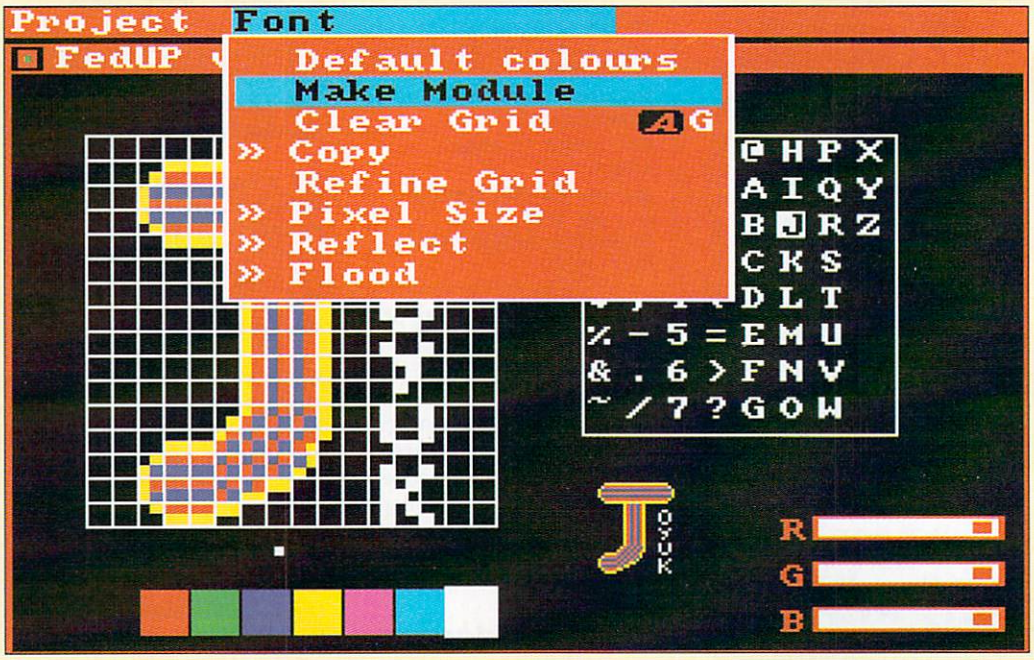
Font/Refine Grid gives you eye-strain but may be necessary to get the letter *just* right. The size of blob you draw with is the Font/Pixel Size – 1 is small, 2 is twice as big.

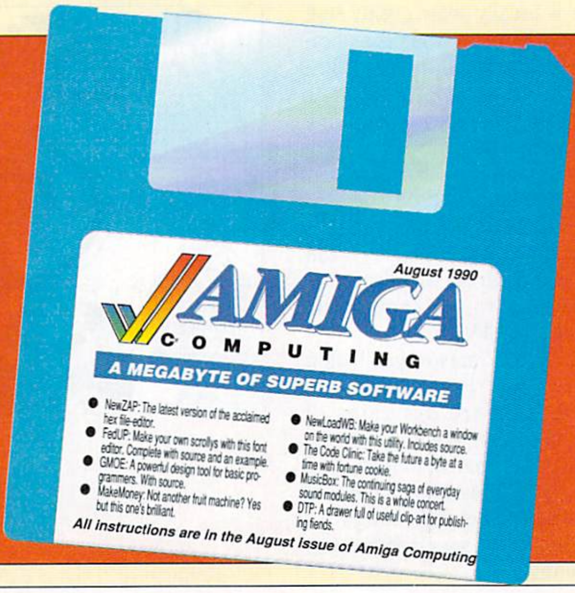
Turn the present letter upside-down, sideways, or both, by selecting Font/Reflect. If you want to fill the grid with the current colour, choose Font/Flood. You can choose to overwrite all pixels or simply set all the presently black pixels to the current colour.

To edit a letter, left click on it in the letter box. You'll get some messages about what's happening from the window title bar. Choose a colour and you can clickety-click squares or paint them in by left-clicking and dragging.

Also provided in the FedUP drawer is the source code for a machine code program that will scroll a message across the screen so you can quickly see what your fancy font will look like on the big day.

All you need do is replace "df1:myfont.mod" in the listing with the path and name of your font module, assemble and run it. Remember, this is for testing binary font modules created with FedUP's Font/Make Module option, not the Project/Save Font option. Remember also that you can't load binary font modules into FedUP, so keep your Ascii data saved with Project/Save Font safe.





Disk problems?

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NewZAP v3.25

NEWZAP is a multi-purpose file sector editing utility. If you've ever had the need to alter just a few bytes within a file, examine its binary and Ascii representations or search for key sequences of digits or characters, NewZAP will make your hacking life a little easier.

It does what text editors were not meant to do – precise position-oriented object modifications. NewZAP will run from CLI or Workbench under 1.1 or 1.2 KickStart with or without fast ram.

The calling sequence from CLI is:

```
NewZAP [filename]
```

where *filename* is the optional initial file to edit. From Workbench, just click on the gadget.

The rest of the program is... well, self-explanatory. The current file can be changed at any time by editing the filename string gadget, writing out any changes to the previous file before switching.

Click on the Hex or Ascii windows to reflect the current editing mode. The cursor can be moved by rolling the mouse with the left button down or by using the arrow keys.

Note that each window wraps to the next – you can click on the Hex window, move the cursor over the the Ascii side, and edit the Ascii position while still in Hex mode.

You can't edit past the EOF byte in the last record.

NewZAP displays and edits full 512-byte sectors via a 106 character wide internal font. Most commands are duplicated with matching command sequences, an exception being the Help key, which brings up the About menu item. Disk errors and sector writes are flagged with a non-abusive audible beep.

Use the Search menu to check for strings or Hex digits, forward or backward, with or without caps matching. Tired of batch files that grind your disk drive? Use NewZAP's Search, Edit and Save functions to modify both instances of ":T" to "T:" in C:Execute.

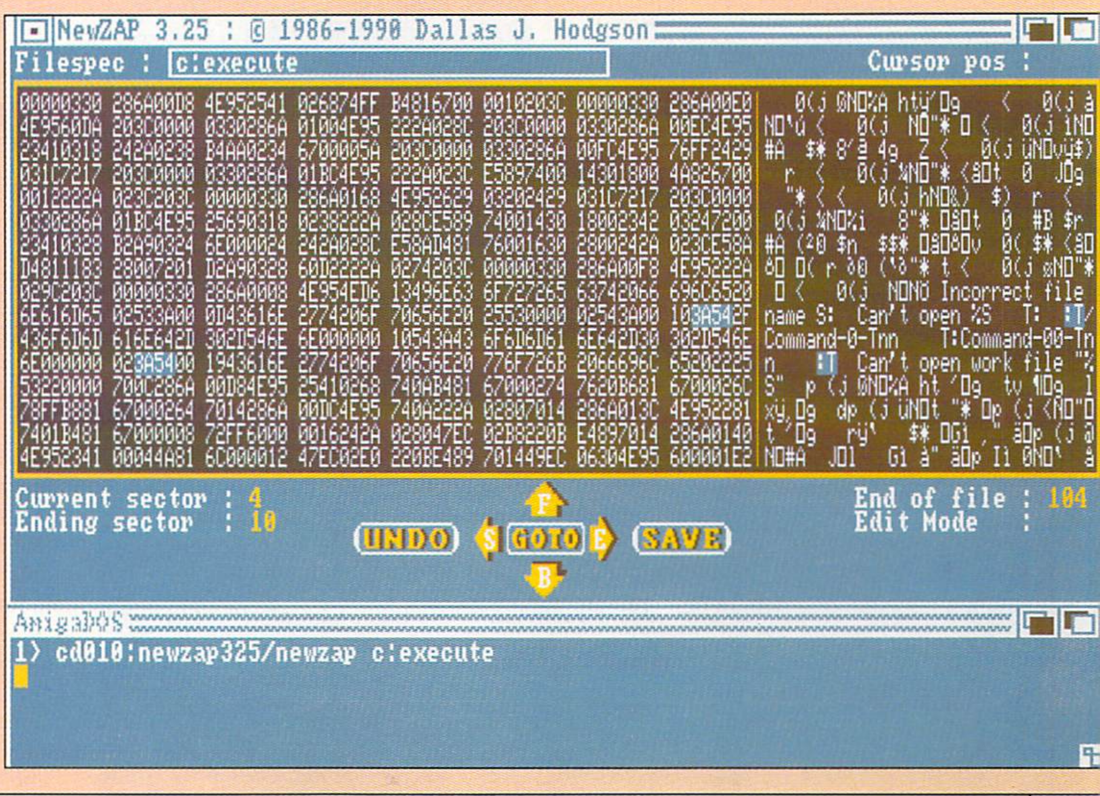
Execute will henceforth store its pre-processed batch files anywhere you want, provided, of course, you have assigned T: to somewhere. I recommend assigning T: to RAM: in your startup-sequence for ultra-fast Executes.

Caveats

- NewZAP expects an 80-column environment for its titles and gadgets. If you haven't set Preferences yet, do so.
- Some folk have requested the ability to extend files. Well, the original didn't support it so neither does NewZAP. Perhaps future versions will support it if the demand is great.
- NewZAP is a two-edged sword, and can destroy object files with careless editing. Work on backup copies.

NEWZAP was written by Dallas J. Hodgson and is copyright ©1986-1990 Proprietary Products. The program is shareware, a concept where authors can release high quality software at low cost and risk to users.

If you like and use NewZAP, contribute something to the kitty. If you don't, pass it on. A $25 donation will put you on the upgrade list so you can receive the next major revision direct from the author. Shareware fees to: *Dallas J. Hodgson, 3665 Benton St #23, Santa Clara, Ca. 95051, USA.*



The source code

THE source code for FedUP has been crunched using the Data option of PowerPacker. If you haven't got this program (it was on the October 1989 cover disk), there is a Decrunch command in the C: directory of this cover disk which will do the job.

The syntax is *Decrunch <source> <destination>*. There are a number of optional extra parameters. Enter *Decrunch* with no parameters to get a summary of them.

If you've booted from the cover disk and have left the AmigaDos window open, use the following line to decrunch the fedup source code:

```
decrunch cd010:reader-contributions/fedup/fedup.c ram:fedup.c
```

Once decrunched to ram you can copy fedup.c to your regular source code disk.

FEDUP was written by Julian Gold, a 25-year-old postgraduate in Maths at Bath University. It is Copyright ©1990 *Amiga Computing*. Feel free to tinker with the source, although if you do anything substantial it would be nice to hear about it.

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You will be sent a new disk with our compliments. Please allow 28 days for delivery.

BIRDS OF A FEATHER

Duncan Evans swallows hard and chicks out whether animation tutors are anything to crow about

ARE you a Deluxe Paint III-using ornithologist ? I'll run that one past you again. Are you interested in watching, drawing, and painting birds, and maybe drawing and animating them on your one meg Amiga with DPIII ?

No, of course you aren't. The few ornothologists I know are more interested in watching their subjects outside rather than trying to draw them on their Amigas. So we are talking about a very limited market here, but that's just for this particular package. Let me explain.

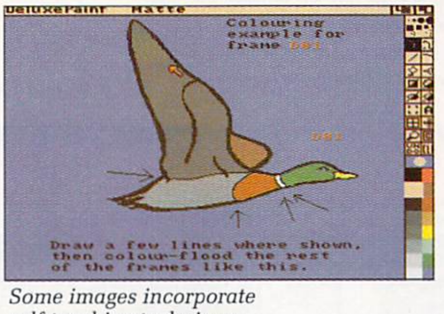
The RealThing animation series are guides to how use the animation features of Deluxe Paint III, with a specific theme in each package. One package concerned horses, this one contains animations of birds ranging from eagles to kingfishers. There are 14 bird kits on the two disks, along with a number of extra backgrounds and a clip sheet of different birds to experiment with.

Two manuals accompany the package. One is a standard user guide on how to get the best from your RealThings software from within the Deluxe Paint III environment (their words, not mine, meaning of course, a guide on how to use one part of DPIII). The other is the actual guide to what is on your RealThings disks and suggestions for what to do with the collection of animations.

This guide is obviously written by a real enthusiast, as opposed to a professional writer, as the tone and content tend to veer towards fawning and statements of the blatantly obvious.

Before we have a look at this in more detail, back to the RealThings User Guide. This leads, not so much gently by the hand, but running hell for leather through the various functions and features of DP III.

First up is an explanation of the different screens concept, with one page behind another, then it's on to screen resolution, saving your output, and the palette with patronising gumf like "Please do not be afraid of getting the best out of these possiblities".



Some images incorporate self-teaching techniques

This approach continues with the simplistic description of brushes and copying, through sizing and shaping brushes and Animbrushes. At this point the take-in-hand approach begins to pay dividends by showing and explaining how to make an Animbrush and edit it.

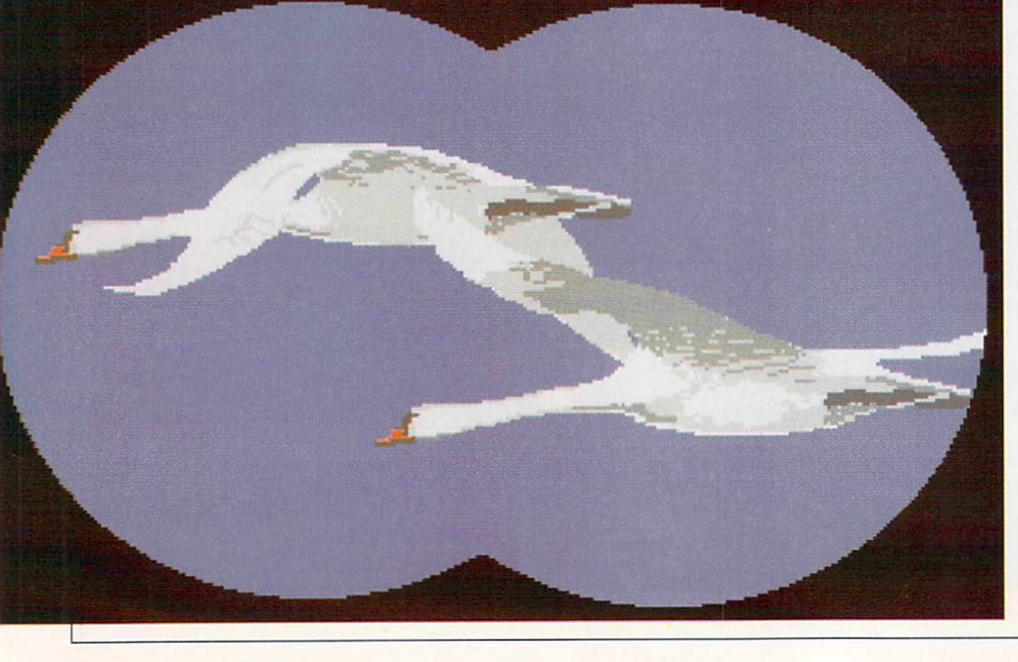
Standard animations are then given a cursory explanation before leaving you with a back page containing keyboard shortcuts. While the tone leaves a lot to be desired, the manual does serve its purpose of explaining and encouraging experimentation with animations.

WHICH leads us on to the kit which came with this particular edition of RealThings – Birds.

I assume you happen to be a bird buff and fanatic, otherwise you're wasting your time reading any further. There are 10 sequenced line drawings of ducks for making Animbrushes of to start with, along with instructions on how to size and make a small movie with doves. Unlike most of the birds featured, the doves are fairly featureless and do not impress.

A clip sheet containing sequenced drawings of the RT Ibis is included to to help make that first fun-filled movie before progressing on to work with the more serious birds.

The first real bird kit is for the stork, which has 26 frames, though only 13 cover the actual wing action. The stork's spring landfall in Europe is



the subject. The swans kit introduces new factors in bird movies by showing the swan climbing towards you, cruising past and then flapping away.

The eagle kit introduces chaining of movements to get the bird to swoop and climb and turn. The tone of the instructions at this point adopts that of a zealot, exhorting you to try a big soaring movie, or to rub out Salman Rushdie – whichever fits into one meg first.

On the second Birds disk up pops the Kingfisher whose irridescent colours Peter Partington (who paints them in real life as well as here – thus there's a plug for his book further on) claims has never been able to capture until now on the Amiga.

A heron, gulls, and the most impressive demo of all, the Barn Owl with a treeline scrolling away in 3D follow, along with a family of mallards and finally the hovering action of the Kestrel complete the bird animations.

Completing disk two are clipsheets of more birds to incorporate into your own libraries and animations, along with scenery and a number of hints and tips. For ornothologists with Amigas the sheer enthusiasm for the subject matter of the authors will encourage and help you along.

The RealThings series certainly works in introducing the sometimes complex subject of animation from within Deluxe Paint III in an intense and example orientated fashion. Although it could be argued that all you need to do is sit down with the DP III manual and take your time exploring the possiblities and you'll save yourself some money.

If you happen to be interested in birds and actually drawing them yourself, rather than learning more about DP III, then this is not the ideal package for you.

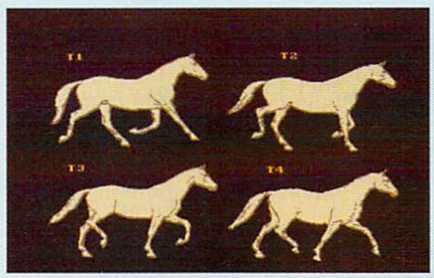
In an educational environment the series can be used quickly and effectively to show how one specific package works, whatever the value of that may be, but does not offer any information with regards to the subject matter of the kits.

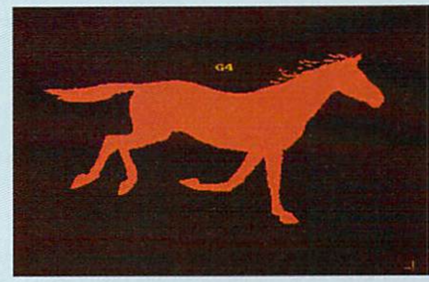
The only solid recommendation I can give this product is for those few individuals who want to draw, paint, and animate their favourite birds on their Amigas, and already know basic drawing and painting techniques. If that's you then you'll find RealThings Birds the ideal package.

RealThing – Horses

The first animation tutor from RGB studios concentrated on creatures of a four legged kind: Horses. Drawing horses which look real is not easy. Animating them is even more difficult. For those of a horsey nature who need some help or inspiration, this animation kit could be slightly less smelly than a visit to a stable.

Most of the drawings are digitised from the work of the late Cecil Trew, a respected animal and figure artist.

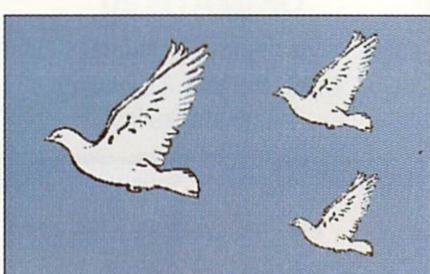




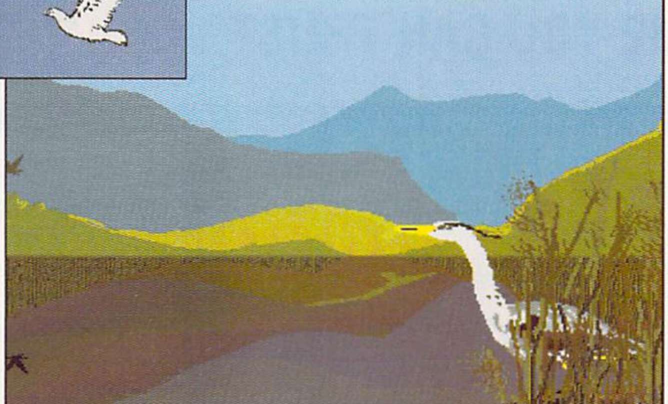
They form individual anim-brush images which may be placed anywhere on the screen with a click of the mouse.

Once the frames of the animation have been finalised, they be overlaid on one of the backgrounds supplied. Trees and shrubs may be placed in the foreground for that finishing touch.

Students of computer art and horse fanatics will enjoy creating their own miniature movies. All we need now is the RealThings John Wayne animation kit.



Birds in flight – one frame from the dove animation



A heron in its natural habitat, courtesy of RealThings and Deluxe Paint III

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EASE OF USE ...
As easy as loading pictures into DPaint, but whether you learn anything really depends on how much latent talent and enthusiasm you have.

DOCUMENTATION..
If you don't understand DP III then the first manual may be useful. The second is for the dedicated or enthusiast only.

VALUE...............
The disks certainly fulfil their objective of familiarising the user with DPaint – but so does the DP III manual.

OVERALL 76%

An educational addition to DPaint. Whether it is worth the money depends on how much you like birds.

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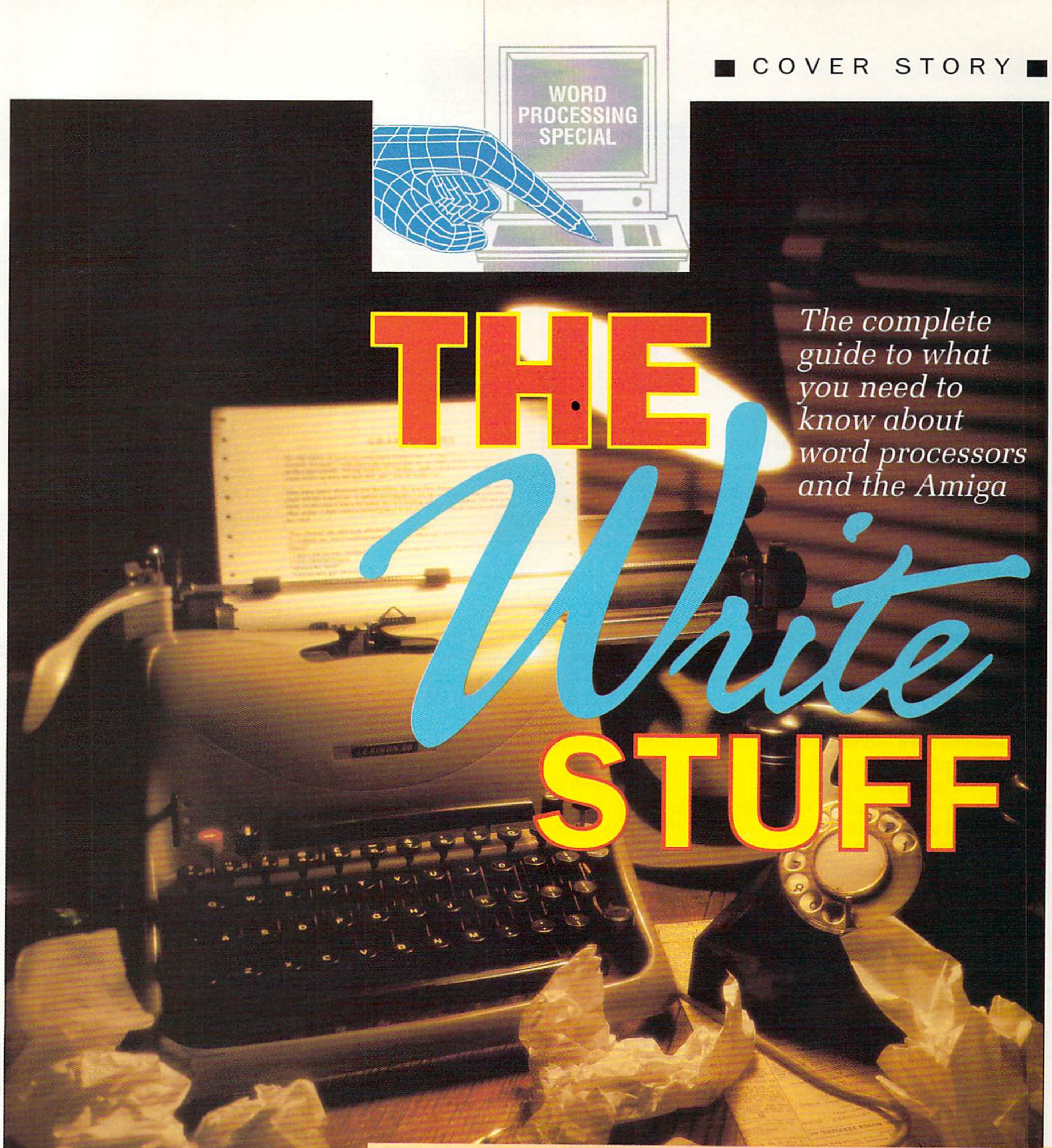
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THE Write STUFF

The complete guide to what you need to know about word processors and the Amiga

BORING. That's what most people think of word processors. Why bother with a computer when a ballpoint costs 20p? Why not use a typewriter?

Of course you can write a letter with a ballpoint. Of course you can spend an afternoon covered in correction fluid if you want. Why not pay someone to type out your CV? It's a free world, after all.

Everyone knows that there are good ways of doing things, and there are better ways. Computer users know that word processors are one of the better ways.

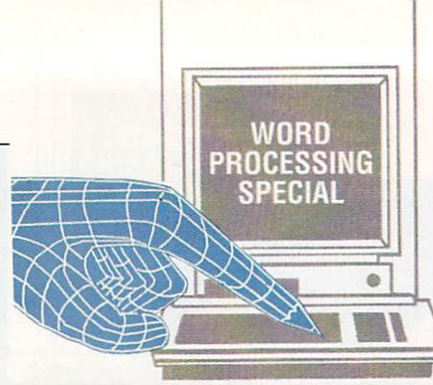
If you're lazy, you need a word processor. If you try and make a living with what you write, you need one too.

If you take even a little pride on how your written words look, you need one.

If you have a business of any size you need one.

Even if you want nothing more than something genuinely useful to do with your home computer, then you need a word processor.

Probably more than any other piece of software even written, the word processor has done the most to bring the computer out of the research lab and on to people's desks.



10 Reasons why a word processor is better than a typewriter

1. You can correct your mistakes without Tipex

When you type your letter, novel or shopping list into a word processor you immediately have one great advantage over a typewriter: not a single letter has been written on paper.

Instead, the entire piece of text has been stored in the computer system's electronic memory. This provides a great deal of flexibility.

No one can type perfectly, 100 per cent of the time. Everyone – even me – makes mistakes. With a typewriter, this means covering the page in correction fluid, frantically blowing on it and trying to type over it again. Invariably the fluid has not quite dried, or the re-typed letters are just a fraction of a centimetre out of line. Unless you are a skilled typist, nine times out of ten the result is a mess.

A word processor will allow mistakes to be rectified on a monitor screen. No mistake is too difficult to correct. Missing words, transposed letters, even the removal or addition of whole lines. By the time the text is ready to be output on to paper, it will be a work of art.

Or course, this is always assuming you can spot your own mistakes. Why not ask the computer to help?

2. The machine can check your spelling

A single spelling mistake might make all the difference in a CV or professional article. The intricacies of the English language catch all of us out at some time or other. For example, I have always had terrible trouble with my spelling and had to look up "intricacies" to check it.

With the large capacity memories available on today's home computer systems, there is no reason why you cannot ask a computer program to check your spelling.

Several word processors have spelling checkers built in. They take the word you aren't sure about, and compare it with the contents of their dictionary. Sometimes they store as many words as possible, sometimes they store parts of words and rules.

For example, the endings "-ly" and "-ing" might be separately recognised. This had the advantage of taking less time and space, but might let words such as "greenly" or "elephanting" through.

In use, spell checkers can work in two ways – all the time or only once. If you wish, you can ask the program to keep a check on your spelling as you type. If you type a word which the computer doesn't recognise, it will tell you. Beep! it will go.

If you prefer, you can switch off the checking until the very end, then ask for the entire piece of text to be checked in one go. This is the best way to go if you don't have a colossally expanded memory, because otherwise the computer will probably have to consult its floppies or hard disk files every time you type a word. Even slow typists will notice the delay if this happens.

In either case, not only will your computer mention that it doesn't know the word in question, it will also provide one or two alternatives for you to try.

Of course, just because the computer hasn't heard of the particular brand of Hungarian lung fish that you are typing a report about, doesn't mean that the word doesn't exist. What it actually means is that the word is not in the program's personal vocabulary.

This happens quite a lot, but as any program worth its low-sodium will allow you to add words to its dictionary, it will happen less and less the more you use it.

3. It can suggest words for you

Ever been stuck for a word? Of course you have. What you really want is another word you can use in the same context as "efflorescence" as you have used that twice already. So you get out your Roget's and look it up. If your word processor has a built-in thesaurus you should be able to search through the alternatives and come up with "sandiness".

4. You can make your own letterheads



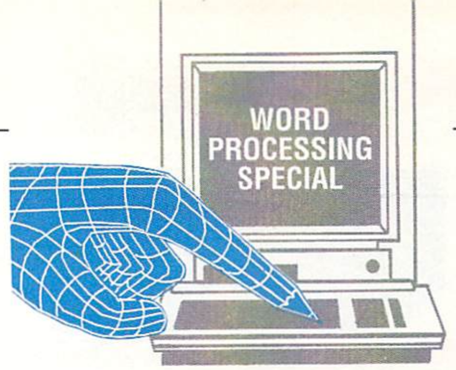
Yes, it's true – why spend time and money getting note paper specially designed and printed when your word processor can do it for you? The design could be something as simple as your name and address printed in enlarged, bold italic print, or as complicated as a small map of your district. Depending on your setup and artistic ability, either is entirely possible.

5. You can include graphics (sometimes)

The prospect of including a graph, pie chart or a circuit diagram might be just what you want in your business report, cookery book or thesis. Several packages will allow drawings in IFF format to be included with the click of a mouse button.

6. You can import data from files

Not only can you include drawings, but also facts and figures. You can set yourself up as a new Reader's Digest



and produce letters like:

> Dear Mr Turner,
> You have been chosen from the inhabitants of Cricklewood Close to take part in our new competition. Yes, everyone in the Turner household of Cricklewood Close will love to win the latest in expensive motorcycles.
> I see from our files that you have made over 17 insurance claims this month which entiltles you to a free gift if you reply promptly.

All that is happening is that data is being read in from a separate data file and automatically being incorporated into the letter. The letter "template" would look like this:

> Dear Mr *name$*,
> You have been chosen from the inhabitants of *address$* to take part in our new competition. Yes, everyone in the *name$* household of *address$* will love to win the latest in expensive motorcycles.
> I see from our files that you have made over *claims* insurance claims this month which entiltles you to a free gift if you reply promptly.

As you can imagine, this can save an incredible amount of time and money on even the smallest mailshot.

7. It's creative

Word processors will allow you to cut and paste large blocks of text about, experiment with presentation and style and generally play about to your heart's content. As a result, it is an ideal tool to aid creativity. You can try things out and change your mind almost indefinitely. This approach of "just messing around" is a recognised way of generating new ideas.

The word processor can improve your writing.

8. It's fun!

Word processors can become a hobby in themselves. Once you get to know a particular package, you realise you don't really know it as well as you could. You are constantly find new and better ways of doing things.

Some packages have their own languages, so you can effectively write your own functions. After several months, you will have so customised your personal setup that no one else will have a clue how to use it. You will have made it your own.

9. Erm...



When you're not word processing, you can be shooting aliens, designing new letterheads with an art package or just plain playing around.

10. ...that's it.

If you have already have an Amiga, a word processing package and a dot matrix printer can be bought for just over £100. You would be lucky to get an electric typewriter for this. Even good mechanical typewriters cost more.

Extra hardware

ALTHOUGH you can process your words on a bare A500, there are some extra items of hardware you will need before you can begin to do some serious work.

A printer

Quite an obvious one this! Unless you want to post photographs of your monitor to your friends, you will need to buy a printer. This need not be expensive, since you can pick up a good nine pin dot matrix printer for about £100.

A monitor

The Amiga will work quite happily with a domestic colour television by using the official modulator which comes with most A500 packs. The resulting picture is acceptable for playing games, but if you are going to be spending any serious length of time staring at a phosphor tube, make sure it is a good quality monitor.

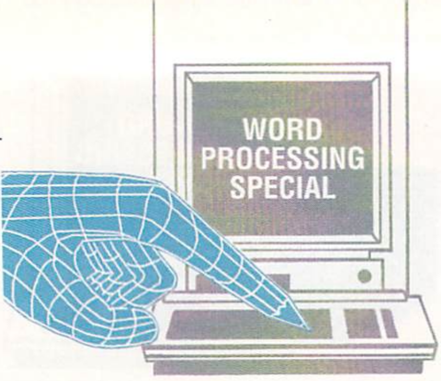
Monitors provide a much clearer, crisper display which means less strain on your eyes and fewer headaches. You might consider buying a monochrome monitor which provide still better quality at a reduced price. You should be able to pick up a good mono screen for less than the price of a portable television.

A good printer

A cheap dot matrix printer will produce output which looks as though it came from a cheap dot matrix. Admittedly the NLQ modes on some printers will produce very acceptable results, but the noise and time penalties imposed can be prohibitive.

To produce top quality output, all day, every day, you need a top quality machine.

Recently a new breed of printer has ➤



➤ started to become affordable, the 24 pin dot matrix. Starting at around the £300 mark, the results are excellent. They are also fast and reasonably quiet. The daisywheel is dead.

The very, very best output comes from laser printers. They can fill about six pages a minute with text which might have been professionally printed. Drawbacks? Only one – they cost about £1,000.

Extra memory

Some word processors will work with an unexpanded A500. Most, especially those with any nice features, require at least 1 Meg. If you haven't upgraded your memory yet, after using a word processor you soon will. Forget multitasking if you have no extra memory.

External floppy disk

Word processors are big programs, especially when coupled with a spelling checker or thesaurus. This means they may come on two or more disks. This means that if you only have the one internal drive you will be constantly asked to swap disks. This is a pain.

Hard drive

The ultimate solution. You can keep your word processor, plus all its files, documents and dictionaries in one place. This is the way the Amiga was meant to be used. You can do without one. Just.

Sandra Vogel, Research Fellow



I'M one of those little computer people who started life writing with a pencil and made the change to computers without ever using an electric typewriter. The consequence is that any electric typewriter I touch clams up and refuses to work. I couldn't live without my word processor!

Being a self taught "sort of touch typist", I'm a little quirky about my keyboard. I wish "I" and "O" weren't so close together – typos often get missed by the spell checker. After all "is" and "it" are both words, ain't they?

Mind you, back in the good old days of my Speccy 48k I used a handy WP I laboriously typed out of *ZX Computing*. All in machine code. Took for ever. But there was nothing now I use that wasn't really available then. It's just easier now – not least because an Amiga has a real keyboard and saves to one of those fabby disk thingies rather than a crummy old C15!

I do everything on my WP. Even letters to the milkman. "Three pints today, please" in Bold Italic Underlined. He thinks I'm cracked! In fact, I'm at the stage where it hurts to use a pencil for more than a postcard. Repetitive strain injury here I come...

The spell checker is manna from heaven to me. I'm the world's worst speller, and it catches most of the typos.

I hate the US spell checkers – the one I use at work tells me "realise" should be "realize". No way, José. And I never use an online thesaurus. Roget's or other peoples' brains are much better.

Word counting is a double edged sword.

It always says you've written far too much when you feel it's just about right, but refuses to count beyond 200 when you're brain runs dry and you've got to produce 5,000 words by tea time.

Well, whaddya know, mine says 320 words. Time for a cuppa!

DTP and WP – what's the difference?

ALTHOUGH at first glance desktop publishing and word processing may seem to be almost the same thing, there are important differences. For example, how much control do you have over how your document is actually laid out on the page?

Word processors normally assume you want your text to be laid out in a standard letter or book format – start at the top and keep going until the bottom of the page in one column. If you want your text to form multiple columns, complicated patterns or circulate in rings, then you really need a DTP package. Even an art package might do a better job.

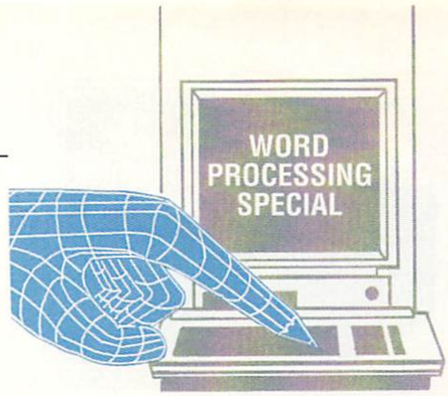
Of course, there are exceptions. Quite a few packages are starting to provide so many features that they have blurred the distinction between DTPing and WPing.

What it boils down to is that at the end of the day the piece of paper you hold in your hand could have been produced by either a DTP or WP package, but one method will have been a lot less bother.

A final point: DTP programs usually come with only a simple text editor as part of the package. This means that even if your main interest is DTP, chances are you will need a WP as well. Heads they win, tails you loose.



A DTP effort inset with a WP equivalent



I have in my hand a piece of paper

THE result of your toil with a word processor will (hopefully) be a screen full of words. All you have to do now is get the words off the monitor and on to a piece of paper. This is usually done with the aid of a printer. Unfortunately, this is the one area more fraught with danger than any other.

There are many potential traps for the unwary. Nobody, but nobody, can get printers and computers to work together in harmony first time. However, if you persevere, you *will* eventually be rewarded with some squiggles on the paper. It takes time.

Not too long ago there was only one way that computers talked to printers – character by character, like this:

"..ok, now do this bit in bold type, THE QUICK BROWN FOX..."

In other words the WP used the fonts built into the printer itself. As the printers were usually of the daisywheel design, you were immediately limited to these characters and no more.

Times change. Now that dot matrix and laser printers are upon us, we can inject a little more flexibility into things. A modern WP package might have the option to dump the output line by line, as though it were a collection of graphics data, like this:

"..here comes a dark pixel, then a white pixel, now a dark pixel..."

This means that the WP can use its own fonts, so you can mix and match as many as you want. You may also be able to incorporate IFF graphics, produced by a art package such as Deluxe Paint.

The drawback is that a graphical line-by-line output takes time.

This page is a perfect example of the RANSOM NOTE type of document. It also demonstrates the ability of the *AMIGA* to use multiple fonts.

Line editors, screen editors and word processors

IN the old days, if you wanted to edit some text on your coal-powered computer system, you would use a line editor. This meant that text from the file appeared one line at a time at the bottom of the screen. You could edit or retype the line, and send it back into the file.

Line editors were used to prepare source code or batch files. They were not much fun to use, but because they were simple to program, you can still find them on various on-line computer systems today. The AmigaDos command EDIT is as close as you want to come to a line editor on an Amiga.

Line editors soon made way for screen editors, which allowed text to be edited at any point on the screen. The screen could be scrolled to show text hidden off the bottom or top. They were much more easy to use than the line by line editors, and some people even started using them to write letters. AmigaDos comes with a screen editor called ED.

By developing a program especially for entering and editing text, and then supplying extra features available from keypresses and menus, the word processor suddenly became the most meaningful way to use a computer. They automatically wrapped words, justified text and checked spelling. In fact, if all the word processors on the planet went on holiday, the world would grind to a halt and billions of trees would be saved from being made into paper.

Stewart C. Russell, student

AS a mechanical engineering undergraduate, I mainly produce short essays, reports, and the annual flurry of "Gissajob" letters and CVs for summer employment. No one package offers everything I need. For the last three years I've used Protext for everything, but even that I find depressingly slow on anything longer than short (less than 20 Kb) files.

Essays need to be well planned and correctly spelt. I could really use an outliner to plan what I'd be writing, but as long as the word processor has good (fast) cut/paste facilities, I can edit some sense into the text once I've finished writing it.

Fancy fonts I can live without. I get very angry with programs that keep me waiting. A good dictionary is essential, though my preference is towards paper ones, since they are easier to browse through and are cheap.

Reports are very different, the emphasis being on the neatness of text and the accompanying graphs and figures. To get all this done on one machine would require a plotter and a page printer, so the graphs are done by hand (ugh!).

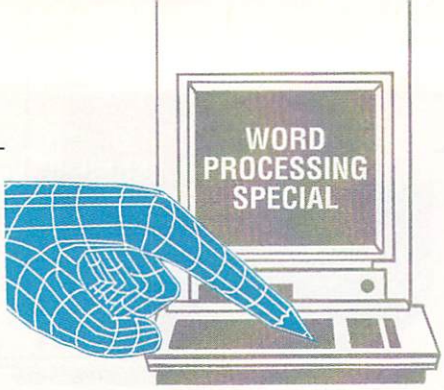


Tabulating data is a real chore – I'd love a package that could integrate and manipulate small spreadsheets in a document as well as the Z88's Pipedream can. There isn't a package on the Amiga that can do this, more's the pity.

Job letters are a real pain. Not merely do they require the utmost care in the presentation, they also need to be written in large numbers.

As it's only presentation that separates an interview from a bin job, resist the temptation to mail merge, no matter how well your system can do it. The year I mail merged I got zilcho interviews. It's more down to how your printer looks on paper than what your word processor can do, so Protext does me fine.

As a magazine contributor, the only capability I need is the ability to produce correctly spelt Ascii to email to the editorial mailbox. I find most word processors too slow. A stripped-down text engine and a stand alone spell checker gives the speed I need. Sticking the two together with ARexx (rather than using the CLI) would make the system as convenient as any I've used so far.



Tammy C. Groves, lawyer



LAWYERS aren't renowned for their fascination with technology, encouraged by clients who prefer to be confronted with oak panelling and rows of dusty books than state of the art computers.

However, many solicitors have a word processor on their desk, jousting for space of honour with rolled-gold fountain pens, legal precedents and the photograph of their children. Some of these solicitors even know how to turn their word processor on.

And what do solicitors do when their word processors are turned on? Sometimes it can be a quick typing in of letters rather than sending a tape to a typing pool. Long complicated "advice" letters may be better composed on a word processor, as it is easy to lose the drift of what you are saying when you dictate off the top of your head.

However, for the solicitor the word processor comes into its own with the use of precedents. Precedents are tried and tested clauses which are inserted into legal documents such as wills, leases, trusts and contracts for sale. Once such precedents have been committed to disk, drafting the actual documents can be a relatively simple matter.

Even if the solicitor is computer shy, a hard copy of such documents can be produced so all that needs to be done, for example to produce a will, is select the clauses required and fill in the blanks.

This brings with it its own unique problems. Solicitors have long been known for their complex and extended ramblings, and the word processor allows for hideous verbosity at the touch of a function key.

The solicitor, being the party of the first part, often includes precedents that he would never have thought of simply because they are on an option menu, assured that this will impress the party of the second part, namely the client.

Fiona Smith, personal secretary



IN my work for a charitable magazine I am fortunate enough to have at my disposal an array of machines and several word processing packages.

When something arrives in my in-tray I have a really tough decision to make – how shall I produce this document? If I plump for word processing, on what do I base my decision and why?

I may decide in favour or word processing if I am am typing a lengthy document in draft which is likely to require many changes, such as the line-spacing. Also, a "find and change" facility for consistently misspelt words, perhaps somebody's name, is a must, so I don't become frustrated searching line by line for the offending word.

An option to have permanent on-screen format lines is very useful, so I can place tabs and indents with the cursor on the line where I want them, instead of having to count and key in the actual character position on the line.

It would also be wonderful to have a vertical rule option for allowing accurate placing of tables or graphics which may have to be added to a document after it has been printed.

A word count option is more of a luxury than a necessity, but still comes in very handy for producing articles where a specified amount of space is available.

Auto centring, underlining are italicising are all standard these days, but it does make life much easier if you actually see some approximation of it on the screen, instead of irritating control key symbols and boxes.

Most up-to-date word processing packages have all these features and more, but my main complaint is that I usually have to use a complicated and difficult-to-remember series of codes and function keys to do something.

My favourite features of any word processor are those which are simple to use, with common sense codes, a wysiwyg reproduction on screen, and which enable me to produce my work more quickly and efficiently. Thus they leave me an extra five minutes for my coffee-break, and relieving me of some of the pressure of deadlines.

Duncan Evans, freelance writer

WHEN John Kennedy telephoned and said, "You're a writer, write 300 words on why you use a word processor instead of a typewriter," I thought, huh, money for old rope. I use a word processor because my typing is hopeless, my spelling none too hot, my thoughts are usually muddled so I need to see what's in front of me and then rearrange it into some semblance of coherent English, and I can never find the right words to use so a built-in thesaurus is a godsend.

Actually my typing isn't too bad, for the two fingered variety (or five if my fingers feel like co-ordinating with my brain). I can type quite quickly, but tend to hit the wrong key from time to time, so I often need to jump back and edit.

I only use a spelling checker if I have plenty of time and the work is for someone reasonably important. For *Amiga Computing* I don't bother. They check it anyway.

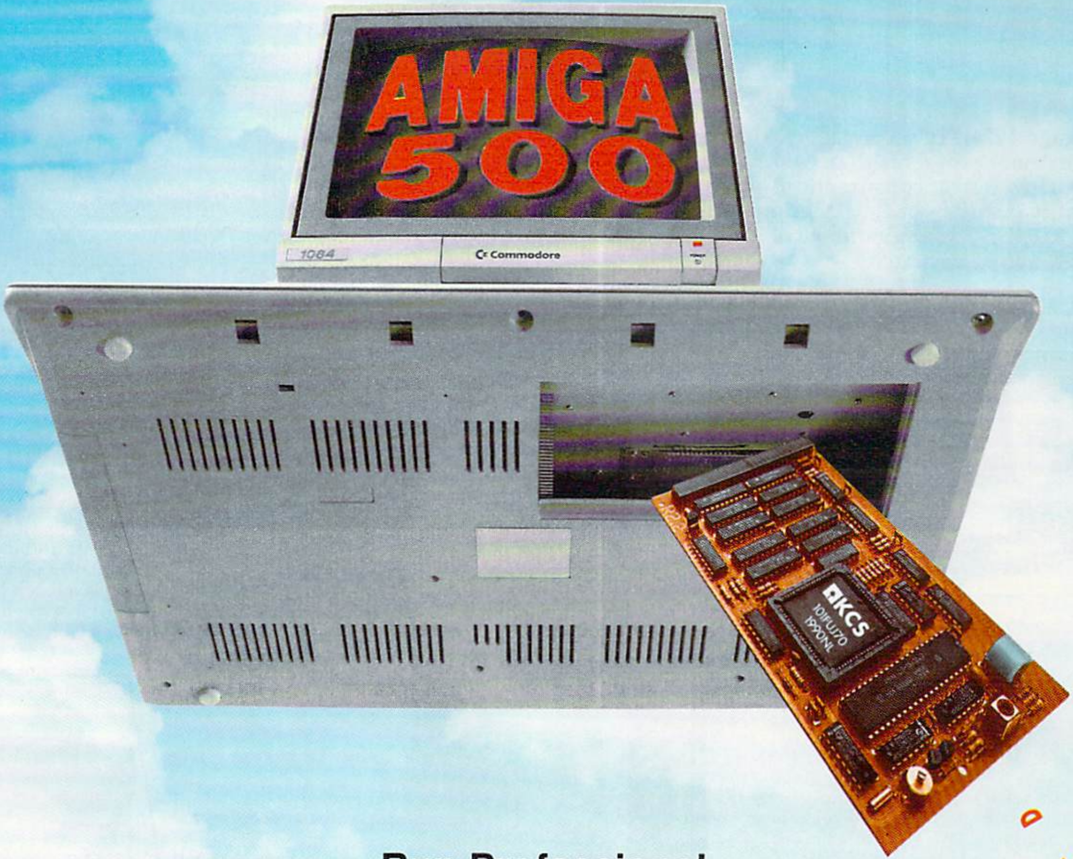
Rearranging paragraphs and cut and pasting aren't that important for small jobs, but when you have to write 3,000 words on six tank games as I did recently then it's nice to be able to chop everything around into whatever order you like.

Then something occurred to me. Up in the *Amiga Computing* office they regard me as some sort of semi-deity, so if I tell them all this these might be the last 300 words John commissions me to do.

So, I thought, I'll say I use a word processor because it's a useful tool for realising creative genius and because I can send people discs with work on instead of paper. It's good for trees too.

Of course the other reason is that with a word counter I can tell when it's time to stop waffling.

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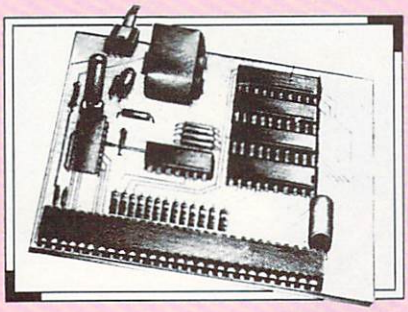
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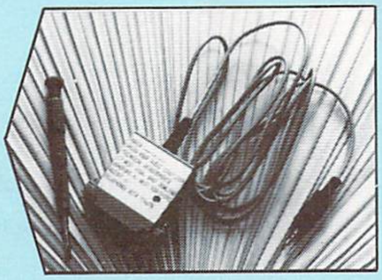
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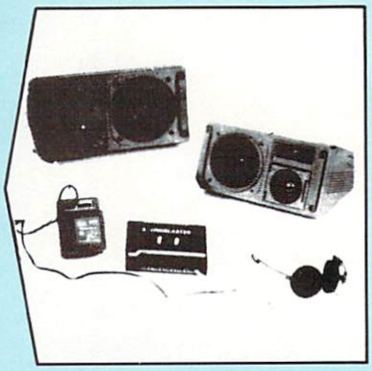
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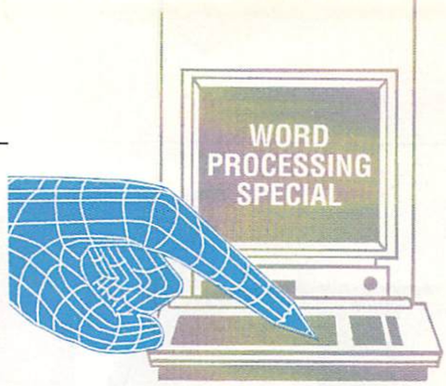
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Glossary

Ascii
The "American Standard Code for Information Interchange". An agreed code which makes sure that all computer systems know which letter is which. It turns out that an upper case letter "A" has an Ascii code of 65, and a lower case "a" is 97. All the other letters and punctuation symbols have similar codes.

By saving a document in Ascii format all extraneous information such as printer control codes are removed. This is the best – if not only – way for swapping documents between programs. It's sort of a very early attempt at IFF.

Background printing
As printing is such a relatively slow task, your computer can manage to do it at the same time as everything else. It prints "in the background".

Character set
The complete set of letters, number, punctuation and strange Japanese symbols that can be displayed by your printer and/or computer. Some of the set, typically those below Ascii 32, may be control characters and do strange things when printed.

Clip art
Drawings and diagrams, sometimes in the public domain, for you to incorporate into your documents.

CPS
Characters Per Second. How fast a printer churns out your copy. Manufacturer's figures are a trifle optimistic, as they are for idealised situations. Laser printers are so fast, they are measured in pages per minute.

Cut and paste
A term which comes from the olden days, when text would actually be cut out and re-placed. Of course, with a word processor you never actually need to use the scissors and UHU, as it is all done electronically.

Daisywheel printer
By using hammers to strike the letters through a ribbon on to the paper just like a typewriter, daisywheel printers were renowned for giving the best results of any printer. However, they have now been superseded by dot matrix and laser printers, which produce comparable results faster and much more quietly.

Dot matrix printer
Traditionally the printer bought by a user, and now becoming one of the most cost effective. The idea is that the printing head is made up of a collection of pins which strike the paper through a ribbon. The more pins, the better the quality. Modern printers have 24 pins and produce output which ranges from good to wonderful. With a special ribbon, some printers will provide colour output.

DPI
Dots Per Inch. Used in describing the resolution of a scanning device. Basically, the bigger the better. A 400 DPI hand scanner is desirable, an 800 DPI scanner incredible.

Escape sequence
What you do when the fire alarm rings. Or another way of describing printer codes, as most printers need an "escape" character to precede the code. The escape character is nothing more than a grand name for code number 27.

NEXT MONTH
After looking at what word processors can do for you, next month we'll be concentrating on the many packages available to run on your Amiga.

Peter Ceresole, TV producer



WORDPROS are the stuff of life itself. No kidding. I use mine to write TV documentary scripts. That's my day job.

A 50 minute script for Horizon is about 25k and I've never needed to write more than 35k in one go. After that I've always started chapter two, so ginormous files aren't part of the show.

What I do need is the ability to edit two files at once and move stuff between them, and a way to manipulate columns of print. This is a typical bit of cutting order, which is an intermediate (and crucial) stage where you're trying to make sense of your material so the film editor can cut it.

You put shots in here	And you wrap the commentary round in here. After a time,
Another shot	you bung in another shot, and then, when Art requires it,
Technical garbage and messages	some technical garbage like shot numbers and messages to the film editor.

Provided the wordpro can do this I can live with it – but I want it to be fast, too – no more than half a second to get from one end of the file to the other. Same for cut and paste. Any longer and the program starts to get in the way.

I do use the spell checker, especially at the end of a long day when I know I've made typing mistakes.

Most important is being able to get to grips with the mechanism. I want to customise the program with macros. I want to be able to see the formatting codes any time I want so when something odd happens I can find out what in hell is happening and fix it. I want to be able to send codes directly to the printer from within the document.

I hate mice and menus. My wordpro is a grand-child of Wordstar and if it takes more than two keystrokes to do anything, I don't want to know.

Especially, I want it to be fun.

HOW TO DTP

In part two of his series Nic Veitch asks: What are words worth?

ALL we talked about last month was how to arrange a publication, how to organise the text and the page to make them visually and logically effective.

I waffled on about space, and I will be doing so again so watch out. I also told you all you need to know about headers and keylines and all that sort of jolly important stuff. But I still haven't touched on possibly the single, most important decision you can make on behalf of your newsletter or whatever. And am I going to now?

Well, OK then, but I want to tease you a bit more first. What is your document made of? No, not paper... Shall I tell you then? It's words.

Subheads, borders, margins – they don't actually mean a thing. They are packaging and should be looked at as such. Someone walking around a supermarket is likely to be attracted by a nice colourful box of chocolates with ribbons and bows – just like someone walking around the newsagents looking at covers.

The analogy continues: If you open up the box (I don't suggest you try this in your local VG) and find all the choccies rattling about so you can't find the praline then you're not going to be too impressed – likewise your text must be organised. But when you reach the bottom line, it's all about words.

The substance is words. Words are what they want. Words are what they pay for (unless you're running a free-sheet in which case words are what the advertiser, and only indirectly the

Typefaces

THE typeface is a general term to describe the style or shape of the characters. Many hundreds of typefaces are available – mostly arranged in families of similar types, for example Times, Times Bold, Times Condensed...

The typeface can convey more than just words, the style of the characters can influence the interpretation of those words – the style itself is indicative of mood and approach to the subject.



Serif type

SERIF type is categorised by the small decorations attached to the main body of a character, usually at the end of flow strokes. These additions serve more than just a decorative purpose – they guide the reader through a word, directing eye-movement from letter to letter.

The effect is to give the reader the impression that he or she has read a sentence of words rather than just a sequence of letters. Serif type has the advantages of flowing handwriting without the disadvantage of illegibility.

Serif type is usually formed by strokes of different thickness uniform in one direction – usually either horizontal or vertical, but can be any angle.

The best known serif typeface is probably Times, which is a standard font found on almost all but the cheapest of Taiwanese printers, but there are a few other notables like New Century Schoolbook, Souvenir and every Amiga-owner's favourite, Bookman.

Serif Type

Sans serif

WELL, having just discussed serif type it should be obvious what sans serif is all about – it is a typeface which lacks these decorative effects and flowing lines.

Furthermore, the characters of a sans serif typeface are generally made up from lines of uniform thickness, without any tapering effects around bowls or ligatures.

Sans serif has a sort of no-nonsense directness which gives it plenty of impact. This makes it ideal for short, punchy headlines like "AJ QUITS" or the classic "WE WIN!", but set small and used for body copy it tends to be quite unreadable.

Sans-serif

Type style

WHAT do you do when you *have* to emphasise something? Put it in italics? Make it bold. This is known as changing the type style. This is one area where computer-generated fonts differ from hot metal. On a DTP system you may be given the option of making a font bold or italic, which is not necessarily the same as having the same typeface in a different style.

Italics are often used for emphasis or for indicating unusual or foreign phrases. They also feature in captions quite regularly.

This is Times
And Times Bold
And Times Bold Italic

Bold is more commonly used to provide contrast for subheads – a nice bold black and white bit is a pleasure for the eyes after an expanse of grey text.

Of course, if you really want to emphasise something, ***use bold italics***.

Type weight

WEIGHT gives even further flexibility to alter the tone of the publication. Additional type variations are available to increase the range and scope of your attention seeking emphasis.

To take an example, and why not, consider Helvetica. There's Helvetica Condensed Black, for those heavy impact jobs – much better than just bold.

For a thin and delicate ballerina of an alcohol-free low-fat typeface there's Helvetica Light.

For the real minimalist there is always Helvetica Narrow. Much fabled and hailed throughout business forms and oft appearing in subheads.

Light type
Medium type
Bold Type

Type size

LOTS of people will tell you that size isn't important. Well, that may be true in certain um, pursuits, but DTP certainly isn't one of them – size is everything.

Now type can be as large or small as you feel you want to make it, but remember – you must have some sense of proportion. Type size should be appropriate not only to what ever it is you are actually saying but also to the surroundings.

Type size should be appropriate to the typeface as well as to the line length and spacing. There is no point having text in a nice easy-to-read size if you can only get one or two words on a line (except headlines).

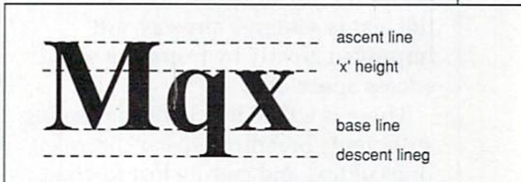
Small type should not be set adrift alone upon a sea of white. It looks lost and lonely and embarrassed – that's if anyone notices it at all. Conversely it is not a good idea to squash giant-sized type in a jolly small space, at least not if you have sane readers – it looks claustrophobic and is quite disturbing to say the least.

Point size

TYPE size is almost exclusively measured in a system of points. A point is 1/72nd of an inch, that is there are 72 points in an inch.

The size of the type is a throwback to mechanical days when it was the actual physical measure of the individual lead blocks that made up a typeface.

Note that although 72pt Times would theoretically occupy one vertical inch, this does not mean that the individual characters (even caps) will be an inch high. Space out of the theoretical inch is reserved for



Courier 12pt
Courier 14pt
Courier 16pt
Courier 24pt

descenders, ascenders and spacing between consecutive lines.

In fact, because of the different designs involved in different typefaces it is not unusual to find that two typefaces set in the same point size are actually of different physical dimensions when printed. This is, of course, highly confusing, but there you go, nobody said it was going to be easy – what do you mean I did? No, I couldn't have made any sweeping generalizations like that.

reader, pays for) and what they expect to see.

So if words are so important why don't we pay some attention to them?

Words have their own system of "packaging" called typefaces. Now there is a lot of confusion between typefaces and fonts and perhaps at the interface between publishing and computing someone should try to resolve it. However, all I'm prepared to say is that as far as you are concerned for the moment they are the same thing.

There are lots and lots and even more than that different typefaces. Broadly speaking (which I do very well), they fall into one of two categories – serifed or sans-serifed. You will hear these terms bandied around a lot and if you own a printer you probably know what they mean already.

A typeface will usually have a number of relatives, for example Times has Times Bold, Times Condensed, Times Italic, Times Bold Italic, Times Outline. Here is one important difference between a real typeface and a computer font. In most packages you will be able to "make" an italic font from your normal bitmap font.

The computer does this by offsetting the rows of pixels to give each letter a slant, but this can be quite different to the actual typeface as seen in hot metal. The same is true of most

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Leading

ADJUSTING the leading, or vertical space between consecutive lines of text, is a simple but effective way of altering the "colour" and overall readability of your publication.

The default leading set in most DTP systems is 120 per cent. This means that the vertical space on the page taken up by the font is 20 per cent bigger than the size required by the font. For example, Times 10pt would actually take up 12 points of space.

Although it may be natural to assume that legibility would be improved if the leading was increased this is not always so. It varies a lot from case to case and is in the end a matter of personal preference but generally things like headings, where the text is set large anyway, are improved greatly by trimming some excess space off.

There is a thin line between having sufficient "breathing space" between lines of text and getting lost in great vats of blankness. If the reader has to search for the beginning of each line he or she will get incredibly frustrated and annoyed and won't write you nice letters to say how brilliant you are.

Leading should be in proportion to the length of your lines. Speaking generally again use narrow leading for short lines of type and increase it as line length increases. This is so as to preserve the correct "scanning angle" for the eye.

Now we come to an area where DTP has really scored over mechanical typesetting – negative leading. Obviously in hot metal days it was impossible to have less than no space between lines of type.

Now, thanks to the wonders of modern technology you can superimpose one line on top of the other to make an unintelligible mess – if you want to of course.

Actually negative leading can be extremely handy for special effects like running the descenders of one line into the ascenders of the next – very arty so they tell me. Can be nice for logos and special design work though.

Tracking and kerning

TRACKING describes the space between letters (no, not the time it takes your penfriend to reply). It is something that many people outside the honourable profession have never really given much thought to, but one which has a great deal of influence on the overall look of your work.

Those of you who have a decent printer will have heard of proportional fonts. These give a width to each character in proportion to the actual width the character will occupy when printed. For example, the character "i" will take up drastically less space than the character "w".

This is not the complete solution however. While it goes some way to alleviating the problems, there are still occasions when two particular adjacent letters could be packed tighter and indeed stand out with their grotesque waste of valuable paper.

The answer to this is kerning. Many

Measure

MEASURE is one of those nice bits of jargon that typesetters employ when they want to confuse and bewilder. Translated into ordinaryman-speak it means line length.

Selecting the correct line length is another one of those critical decisions. This is made harder because of the large number of factors that have to be taken into consideration.

Fifty, or in extreme cases perhaps sixty characters to the line is considered about right. This has the effect that depending on the typeface and size you may have to add extra leading between the lines.

If the measure would normally be more than the recommended figure drastic steps will have to be taken. Use a bigger font, within reason, to occupy that extra space, or even better bung in a few columns.

Multiple columns will bring in a different set of rules as regard to measure.

A guideline is that line length should never exceed more than the width of one and a half times the lower case alphabet of the type face and size in use. In plain man's talk about 39 characters.

From these measurements you should be able to estimate how many columns to use.

Justification

NO, this is nothing to do with a cunning way of avoiding lawsuits from Elton John. This is yet another important decision to be made on the shape of tour text. In fact all decisions about the overall feel and shape of the text are important; I suppose you've worked that out by now.

In the interests of legibility your body text, and indeed headings, should conform to some sort of uniformity – just so the reader knows where they stand as regards to where each line begins and ends. Otherwise it's like driving at 40 miles an hour down the road and not knowing exactly when you are going to stop.

The usual, conventional way to do

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"special" fonts, like bold, that are manufactured by the software rather than taken from a bitmap.

Just as important as imparting some sort of overall style is that the words should be not only legible, but *easily* legible. It's not enough that someone could read it – they're not going to put themselves out for you. Whatever you've written can't be so interesting that everyone is going to get eyestrain and headaches over.

Obviously it is impossible to have everything set in giant "Janet and John" style type, not to mention difficult to follow. Some sort of watermark has to be laid down, some sort of grading system to decide which piece of text gets the most emphasis and exactly how much emphasis that is. This is especially important in newspaper-style publications where stories are competing against each other.

In books and information sheets this is quite easy. Everything follows a logical path, headings are all set in the same type, so is the body text. There is no conflict, no fight for space.

In newspapers this is different. If you were editor of the County Down Spectator I would expect you to set a story about Bangor Council declaring war on China a few sizes bigger than the local tide times.

Headlines are important – everyone should know what the lead story is

top-end DTP packages (Gold Disk's Professional Page springs to mind) offer a kerning facility which will detect such couples and do something to bring them into closer proximity.

Many diehards still prefer to do it by hand – good luck to them.. It does produce greater savings in places but is very labour intensive – the sensible way to do it is let the silicon wizard 68000 have a go first and then tidy up the glaringly obvious bits later.

This does not mean that we are always interested in eliminating space, though this will probably be the case most of the time. Space between letters can be used most creatively in designing headings or title bars for wobs (reversed type – white on black) and artistic stuff like that.

WAVE
WAVE
WAVE

Tracking can save space
Tracking can save space

things is left justified or ranged left. This means every line begins at exactly the same position on the left hand side of the column and continues on until a word would exceed the line length. At this point the system will take a new line and start again with that word. This leaves the right-hand side of the column uneven, so this method is also sometimes known as ragged-right.

An alternative method is the opposite – right justified, set right or ranged right. This means that every line *ends* in exactly the same place and starts in an uneven fashion.

This doesn't go down too well in normal copy, but is excellent for side captions on the left of artwork or text in the margin like comments or subheads. Because the eye reads from left to right there is a sort of clinging attached feeling to ranged right text against some ordinary text. It also forces the reader to slow down, inevitably making them take more notice of each word.

Centred text, where it is set to centre around the mid-point of the available line, is yet another option. This is usually used for short headlines that span more than one column. On the whole, no matter how great the temptation, avoid centring long headings as the constant searching for the beginning of each line will bore and annoy readers before they even get to the body text, which is the proper place to bore and annoy them.

The last major way of justifying your text is fully – that is fully justified or flush left/flush right. I know what you're thinking – how can this be, did some amazing genius write the copy so it fitted into each line?

Well, no. What happens is that extra space is inserted between the words so that everything fits. If you have a DTP package worth its weight in potatoes it will also adjust the inter-character spacing if it reckons that the space between words is getting a bit much.

Fully justifying text can cause some nasty problems. Rivers of white (nothing to do with Enoch Powell) can be particularly offending to the eye. These are caused by excessive spaces ➤

Left justified, ranged left, set left or ragged right are all terms used to describe this type of alignment.

Set right, ranged right etc., are terms used to describe this style of justification. It is particularly good for captions and notes in the margin.

This alignment is known as centred for obvious reasons.

This is called fully justified, flush left-flush right or just simply flush. It can tidy up a page for a nice layout, but watch out for rivers.

***before* they actually pick up the paper. How loud to shout depends on how important the news is. Just because it is the lead doesn't mean you have to go over the top. It's always worth keeping a little something in reserve, a nice bold 96-point say – you never know what's going to happen. As Bogart said, when a dog bites a man that isn't news, but when a man bites a dog...**

Leading, type size and all the various tricks are useful not only for making your page look good, but for filling it up or squashing it in too. It's all very well telling some poor overworked hack that he has to write 647 words, but even if he does that you've no control over how long the words are.

You could go further and tell the poor blighter that he has to write 784 cm of text output in Times 12pt, but I think that might be construed as taking the expression "written to length" a bit far.

The point is that nothing ever comes as predicted. There is an ancient Greek myth about a chap called Procrustes. This fellow had two important items of equipment – an iron bed and an axe.

What would happen is this bloke would hide out and ambush people. Then he would take them home and strap them to his bed. If they were too short he would stretch them to fit. If they were too long he would give ➤

➤
between words, resulting in the reader, and his wonderful eye, being able to trace a line through this white space down successive lines of text.

One solution is to either change the typeface or change the column width, because you are not getting enough characters to the line. In cases of extreme rigidity of design there is only one other alternative, and it's a bit kill or cure.

Hyphenation is the name of the game, the stakes are high- you may remove the rivers but at the cost of turning a column into a nasty mass of hyphens.

DTP packages handle hyphenation in two ways, both with advantages and disadvantages. Either they look up a dictionary for possible hyphenation points or they use an algorithm. Really cunning programs will combine both methods and results from these are rarely unacceptable.

Indents

TAB spaces are used to "set off" new paragraphs and further "open up " the copy. Usually these can be handled automatically by your DTP system with a value for indentation expressed as a percentage of a full line (about 20 per cent is usualy right).

Indents, which are permanent offsets for the complete block of text, are very handy for drawing attention to lists of points or further highlighting a long quote from the normal body text.

Both of these techniques are only effective when dealing with long columns of ranged left or fully justified text.

Runaround



RUNAROUND is a technique for absorbing space left by an irregular outline on an illustration or other artwork. This is also known in some archaic software as having "variable margins" which I suppose accurately describes what happens.

Instead of fitting flush or at least relative to a fixed vertical line the text begins at a specified distance from the edge of the artwork (of course the artwork can equally well be on the right-hand side of the text in which case it ends at a fixed distance from the outline – a bit trickier).

Opinion is split into two (or possibly more) camps on this one. Some argue it makes the text unnecessarily difficult to read, others say it is a nice way to use up excess space and tie artwork to the copy. Interestingly it is a feature missing on many high-end DTP packages – surely it is not that difficult to program? Well, you'd be surprised, let's leave it at that. If you can't get your software to comply, you can always tackle the job in the good old fashioned manual way. On short things, or a regular gradient it's not too bad – otherwise pay someone else to do it.

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them the chop. And if they fitted just right? Well, of course, nobody ever fitted *just right*.

There is always some fiddling to do. How much depends on how well planned everything was to begin with. If it comes to the crunch words must fall by the wayside rather than stay in at the expense of bad design.

Copyfitting in DTP is a widely discussed – usually in loud voices – and generally emotive topic. It is also one we will be coming back to towards the end of the series.

Now you know all about typefaces, all about text and just how important the reader's wonderful eye is. Already you could be editor of a computer magazine – but believe it or not there is still more to learn.

● ***NEXT MONTH: Where did it all go wrong? – common pitfalls unearthed. PLUS some application specific advice and all about artwork.***

Glossary

ALIGNMENT: Alternative term to justification. Basically how the text is arranged relative to the margins.
ASCENDERS : The bits that poke up above the x-height of a typeface, like the "stalk" of a letter "d".
BANGOR : A small seaside town in County Down. Of no relevance whatsoever to DTP.
BLACK: A style of type that is even bolder than bold.
DESCENDERS: Bits that hang below the baseline of a typeface, like the limbs on "y" and "q".
EM: A unit of measurement defined as the width of a capital letter "M" in a given font or size. The reason for it's use is because of this relativeness to a particular size of a particular font.
EN: Another unit of measurement, equal to one half of an em.
FACE or TYPEFACE: The collective name for a series of characters designed with a generically consistent appearance.
FULL-POINT: Typesetter-speak for a full-stop.
LEADING: Refers to the space between successive lines of text. The term derives from the extra strips of lead which were inserted between lines of hot metal back in the good old days.
MEASURE: Typesetters' posey way of indicating the maximum length of a line of text. Thus fully justified uses the "full-measure".
OBLIQUE: Style which slants the typeface but makes no other alterations.
PICA: Unit of measurement. Points are a little fiddly for measuring big things so picas, which are defined as being equal to 12 points, are used more often.
TRACKING: a term used to describe the space between individual letters on a line.
TYPE: in the old days this referred to the actual block of lead used to produce a single character. In these enlightened times it refers to a printed character, no matter how it was produced.
TYPEFACE: See face.

Stewart C. Russell takes a look at some new public domain software, including the latest in affordable C environments

DESPITE the large amount of PD software on the Amiga, usable PD compilers are very thin on the ground. This is partly due to the large amount of work in a compiler, and also to Commodore-Amiga Inc. having expressly forbidden the redistribution of include files.

Include files are the things which pre-define all AmigaDos' functions to the compiler. Without them, you'd have to supply all the library offsets and definitions yourself – not a wonderful prospect.

Since C is the language that most of the Amiga OS is written in, it's the language that most people want to learn. Up until now, most prospective programmers have had to shell out over £100 on a commercial compiler. That's a lot of beans for a language you might not even like.

THE Atari ST has had two usable C compilers for a couple of years now. The best is Sozobon C, which has been ported across to the Amiga several times, with varying degrees of success.

Amiga Sozobon C has until recently lacked most of the features needed for easy compilation, or has required files from several PD disks. Steve Hawtin of Basingstoke has recompiled the system, added some include files, and packaged all the support programs necessary on one disk. He's also renamed the whole thing NorthC for good measure.

NorthC will run on a single drive 512k machine, but the size of program you can compile will be greatly limited. Unfortunately Fred Fish has set up the disk (number 340) so that it will only install on a dual drive system. I guess everyone stateside must have two or more drives.

NorthC comprises a compiler, an assembler, a linker and a front end program to stick them all together. The front end is loosely modelled on the Unix *cc*, since it has a few switches in common, and defaults to an executable image name of a.out.

The *cc* program automates the compilation process, so you never have to deal direct with the compiler, the assembler or the linker. The penalty of this additional convenience is a slight loss of control at each stage.

Only the compiler module belongs to NorthC – the assembler is Charlie Gibbs' freely distributable A68k and the linker is The Software Distillery's Blink. These well tested programs are fast and reliable.

The library and include files supplied are rather sparse by modern standards, containing only a subset of the Kernighan and Ritchie definitions. The most glaring omission is in the standard output function "printf" which can't handle floating point arguments.

The upshot is that you can't print anything involving floating point – you don't really need to if you're just beginning to learn C. Steve Hawtin hopes to rectify this situation fairly soon.

The NorthC startup code, which is compiled in as part of every program, allows an icon to be added and the program used from Workbench. It opens a NEWCON: console window by default which may cause Workbench 1.2 users problems.

Every compiler should come with demo routines. NorthC is supplied with one huge demo, which compiles to be a Go player. The golden rule of demo routines is that they should work. This one compiles, but Gurus out almost immediately. Nice one.

NorthC is certainly complete enough for beginners to C (sorry) if they like C or not. The code produced is not very fast or optimised in any way, but it does work.

The latest (V1.1) version of NorthC is yet to be made available from Fred Fish, but can be obtained from most UK libraries.

Strut your structured stuff

THIS is quite a different kettle of Fish Disks from NorthC. PCQ Pascal comes complete with just about every include file you'd ever need. It also has a large number of demos, all of which compile and run.

Pascal was originally designed as a teaching language for colleges and universities. Since so many people have learnt Pascal, it is now in common use in all areas of computing.

PCQ Pascal is a subset of Standard Pascal written by Patrick C. Quaid –

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➤ hence the PCQ. The only feature missing is the ability to use sets. To the uninitiated this may seem a great loss, but no one I know has ever felt compelled to use Pascal sets.

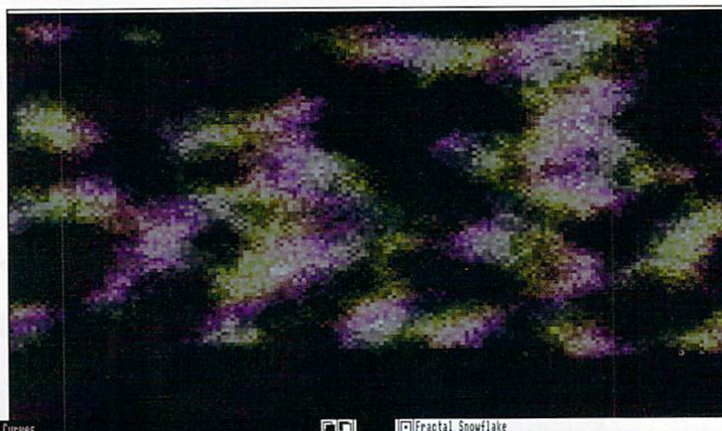
The include files are almost complete for all areas of programming the Amiga. You won't have to include any files if you are just outputting to the terminal, but you need them to define the system records (structs to C'ers).

Those of you who use Pascal will be wondering why I mentioned include files, since you know that Pascal doesn't support included modules. Patrick decided that this would be helpful, and also put in some Modula2 datatype conversion functions. Anyone for Pascula2?

The demonstration files are a thing of beauty and a joy forever. Just about every function is covered, from simple window handling to IFF sampled sound playing. You might have to edit the source a little to reflect where you have the include files. The programs will run once you have done that - one up on NorthC there.

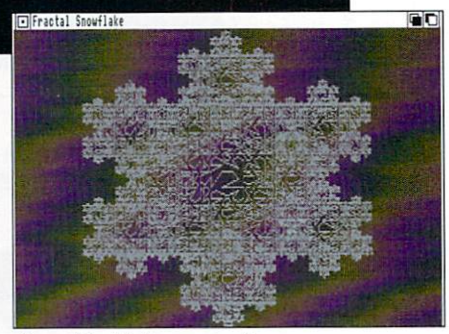
PCQ Pascal compiles in a way that would make Mr. Wirth seethe. After storing your source, you call up a little AmigaDos script file which invokes the compiler, the assembler and then the linker.

IF YOU want an easy time of it PCQ is supplied with an ARexx macro to be run from Cygnus Ed. This builds an integrated compiler environment which will even mark lines which contain errors. There's a whole include file devoted to ARexx, so this





Not Harper's Bizarre, but Quaid's Bezier



Snow? In high summer?

compiler is certainly ready for the ARexx revolution.

Since the compiler actually produces an assembly language source file, PCQ allows you to embed 68000 mnemonics in the source. I do not have the imaginative capacity to think of what Mr. Wirth would say about that.

As with NorthC, the assembler is Charlie Gibbs' A68k and the linker is Blink from The Software Distillery. At the risk of being boring (which I could, of course, never be) you get small.lib too. At the risk of being repetitious, I'll say that you can use that lot for 68000 assembly language programming too.

The compiled-in startup code is quite compact, and supports Workbench. It does everything that the NorthC startup does, yet a simple "Hello, World" program from PCQ is just over half the size of NorthC's effort.

The only disadvantage of PCQ when compared to NorthC is the slowness of the compilation. It takes around half a minute to compile anything of any size from a hard drive. But then, you can't complain about the price.

PCQ Pascal is on Fish Disk 339. I like it a lot – you will too.

Pirates spread new sequencer

UGA's Musical Enlightenment sequencer has been hacked by pirates and is being spread across Europe via electronic bulletin boards.

The boss of UGA, Ron Fonteine, said in an open message to the Amiga community: "On Friday 2 March we released M.E. and it was changed and uploaded on Saturday 3 March to several international pirate boards. There wasn't any form of protection in the product and the sales price is 50 per cent of a normal price for this sort of product".

The most famous Amiga music sequencer of all, SoundTracker, a commercial program still being marketed by German software house EAS, has been hacked and "re-written" by pirates so many times now that it is generally considered to be public domain.

This is not the case, although EAS will soon be marketing NoiseTracker II, a vastly superior SoundTracker clone written, ironically, by a group of hackers, and there is speculation that EAS will place the original SoundTracker and its many clones officially into the public domain.

I spoke to Robert Stallibrass of Active Sales and Marketing, the company which used to distribute EAS software in the UK. He told me that SoundTracker had only sold around 1,000 copies in this country.

The number of pirate copies cannot be estimated. It is certain that there are more than 1,000 of them.

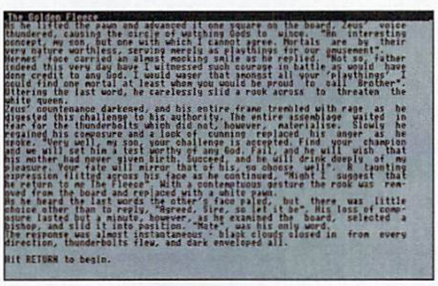
Examine everything

WHAT do an Amiga 1000, Road Runner, a very large and friendly Doberman Pinscher, long distance running, HiSoft Basic and an strange kind of logic all have in common ?

Very little to most of us, but they all help (or hinder) Dr. Jim MacBrayne in creating his unique brand of text adventures.

The Amiga, with all its memory, processing power and disk capacity would seem to be a pretty good text adventure engine. Unfortunately, very few software writers noticed this, preferring to exploit the graphics and sound capabilities instead.

This has come as a great disappointment to text adventurers, since they'd rather see the scenes with



their mind's eye rather than through a glass, darkly. Infocom did port all of their adventures to the Amiga, but their heart wasn't in it, and very soon they too defected to the ranks of the graphical adventurers.

Way back in 1982 Jim MacBrayne wrote a little adventure for the CBM Pet called Excalibur. It sold all of three copies, since the distributor had an aversion to advertising. In 1983 he wrote a sequel, The Black Tower, which sold no copies at all, so he released it as PD.

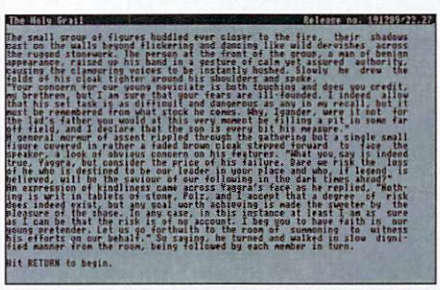
After a few years of hearing nothing, Jim thought that his adventures had sunk without trace, so he continued playing nothing but Infocom's on his C64. He started hearing that people were enjoying his games, and many people urged him to keep writing.

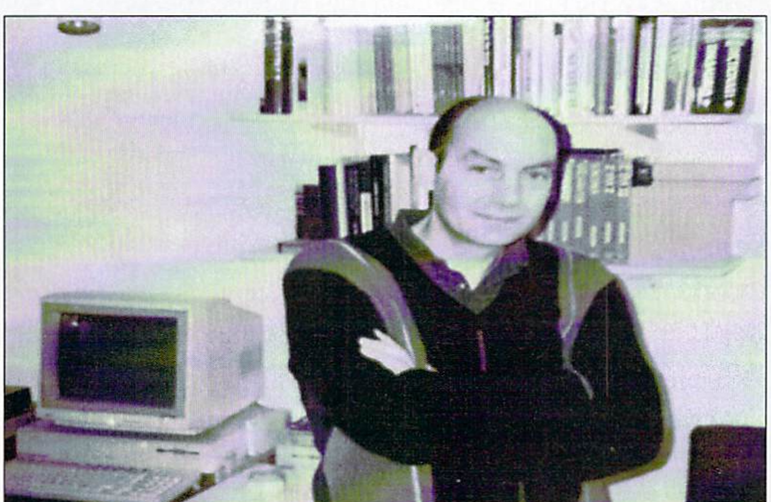
JULY 1989 saw The Golden Fleece roll out from Jim's A1000 and HiSoft BASIC compiler. Reaction to this adventure was no less than ecstatic, with influential adventure people likening it to Infocom's finest.

The Golden Fleece is an heroic quest for an object so carefully guarded and hidden that most mere mortals would never find it. But then, being a classical hero, you're not just anybody's mere mortal.

The game features a very fine parser of close to Infocom standard. Jim put a lot of planning and work into this adventure, and feels that he got the

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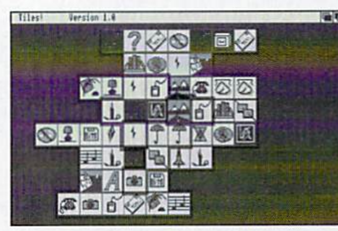
Jim MacBrayne – Adventurer extrordinaire

GAME OF THE MONTH

TILES

HERE'S another oldie but goodie that's guaranteed to keep you pleasantly frustrated for many a month. All you have to do is clear up a pile of patterned tiles.

Nothing phenomenally wonderful about that, say you.



You can only pick up two tiles at a time from the edges of the pile, and the pattern on both must be the same.

It's possible for one part of a matching pair to be hidden under a whole bunch of other tiles. It's equally possible that the tile you want is right in the middle of the pile, and therefore immovable. Do you feel so confident now?

It is possible to learn a strategy that works nine times out of ten. It took me about three months to work it out, and I will only divulge it under threat of a large financial incentive.

The feeling of "stuckness" got from a game of Tiles which hasn't quite worked out is totally unique. You can use a step back feature to undo your problem, but the real snag lies in working out where you went wrong.

Tiles is simple, enjoyable, sometimes frustrating, and could be considered to be mildly educational. Find out for yourself - it lives on FAUG Disk 80, or on Fish Disk 241.

balance between atmosphere and puzzles just right.

Seven weeks of late nights brought The Holy Grail into the world. With a much improved parser and enough text to fill an entire disk, The Holy Grail is huge and extremely difficult.

It is another quest, with some really mean puzzles – can you move a castle drawbridge when the lever is on the other side of a wall? Despite its size – it requires 1 Mb to run – Jim feels that it was slightly rushed, and some of the puzzles are too linear for his liking. That doesn't make it any easier, though.

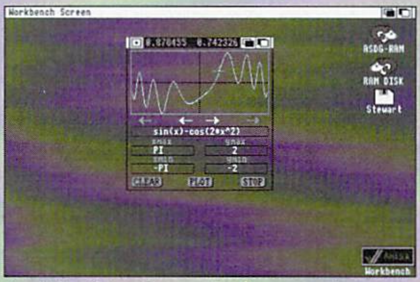
Afficionados of Monty Python will warm to the Torture Chamber, complete with soft cushion. Every item in all Jim's adventures is made by Acme Inc, as inspired by Road Runner.

Jim is currently working on a new adventure, The Mission. Around 99 per cent of the location text is merely scene setting, but every item can be picked up and examined.

Most libraries will have The Golden Fleece and The Holy Grail; 17 Bit catalogue them as Disk 430 and 556 respectively, but other libraries do have them.

SOMEWHERE on my desk, underneath a bundle of printed doc files, disks, manuals and PD catalogues, there lies a calculator. It's a very nice calculator but I haven't seen it for months. The excavations required to find the thing would take so long that I can often work out cube roots before I find it.

But no longer will I be forced to cast around for the Casio. I've discovered Calc, perhaps better known as Jimmy's Calculator. There are many calculators for the Amiga, ranging from the awful Commodore one (and they used to make such good ones, too) to the powerful but confusing Hewlett-Packard clones.



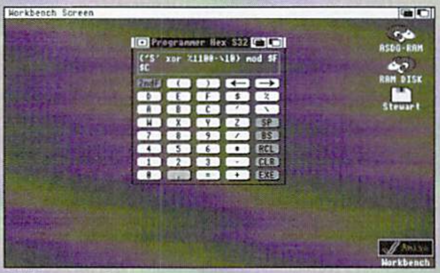
Just the thing for maths homework

But although Calc is very powerful, it is as easy to use as any calculator you can buy, and it's free.

It has three main modes – scientific, programmer, and graph calculator all rolled into one. It can be shrunk away to a neat little icon, so you can keep it loaded while you do other things on the Workbench screen.

The scientific calculator is very impressive, using double precision maths to handle very large and very small numbers – to the positive or negative 308th power of ten. It handles all the trigonometrical functions you'll ever need, has 25 memory variables, and has the constants *e* and π predefined.

The programmer side of Calc will prove useful to everyone with a love of longwords. Most of the 68000's logical functions are supported, with the notable exception (was that too subtle ?) of BCD functions. Integers can be signed or unsigned, from 8 to 32 bits, and can be stored in any of the 26 memories.



It'll put a hex on you...

The graphing capabilities of Calc are particularly neat, and will be appreciated by everyone who suffers from maths homework. Just about any function can be graphed, and values can be read using the mouse, including regions where the function is undefined.

Calc is on Fish Disk 210. Make room for it on your work disk today.

PD Update – MED v2.01

REMEMBER MED, the sequencer featured in the first PD column ? Now it has grown to be quite the most comprehensive package of its type. It is also PD, and comes complete with source.

Although MED v1.12 was a well behaved Amiga program, it lacked helpful features like a file requester. This has now been fixed so that all disk operations can be performed with the mouse.

MED v2.01 is the perfect replacement for SoundTracker, since both songs and modules created by SoundTracker are supported. IFF support has been extended to three and five octave samples - this also means that MED now supports five octaves rather than three. If you have enough memory, MED can now handle 31 different samples in one song.

The biggest change is the addition of 16 channel MIDI sequencing. Now you can have a song with 16 channels, and also create and edit songs from a proper musical keyboard.

MED has sprouted SoundTracker-style equalisers and a very efficient assembly language player routine. What it couldn't lose from v1.12 is Topi, the Amazing Jumping Mouse Pointer Metronome.



Getting MED v2.01 may prove a little difficult, for hereby hangs a lengthy tale. Teijo Kinnunen sent MED v2.00 to Fred Fish, who included it in his collection as Disk 349. Minutes after posting the disk Teijo found that v2.00 was full of bugs.

Two frantic days later, a bug-free MED v2.01 appeared. Fred Fish had started to distribute v2.00 despite the bugs, and several PD libraries in the UK are distributing it too.

If you want MED v2.01 (and you will) you'd best ask for it by name. Some libraries have it - it's just a question of finding one that does.

Portfolio

IAN McDonough Dip A.D. ATD. IPS.E. was born in Warrington, Lancashire in 1946 (presumably without all the letters).

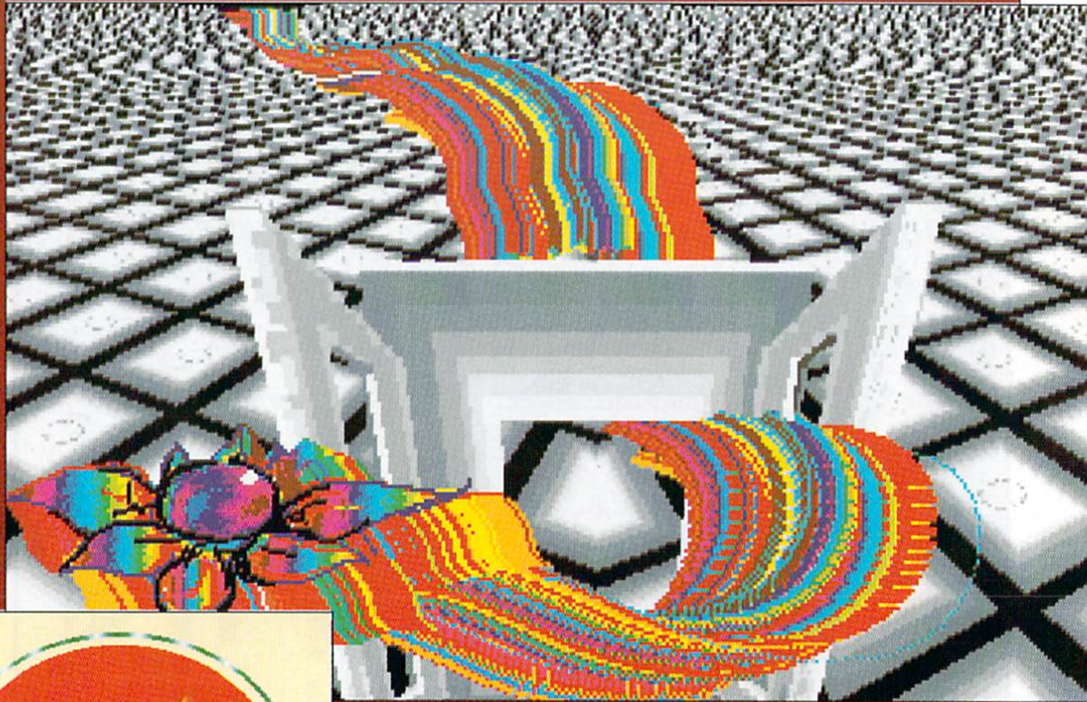
After studying at the Liverpool College of Art he moved to Northumberland where he now teaches art technology at the Duchess's County High School.

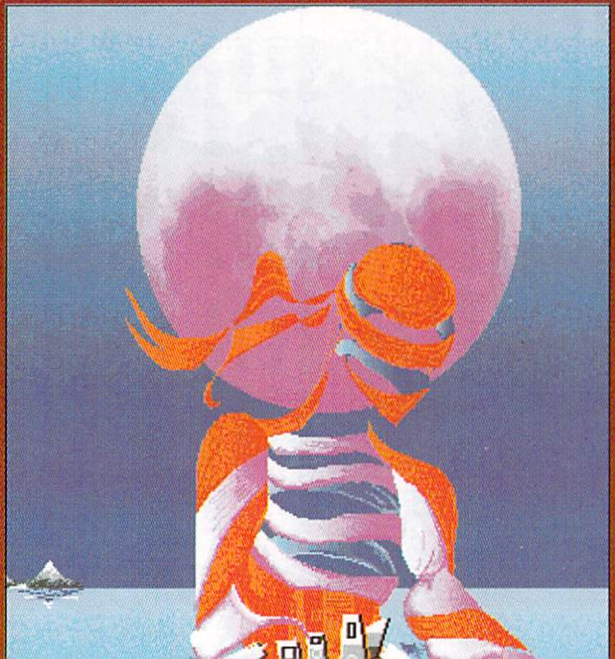
The art department there has two Amiga 500s with extra drives and

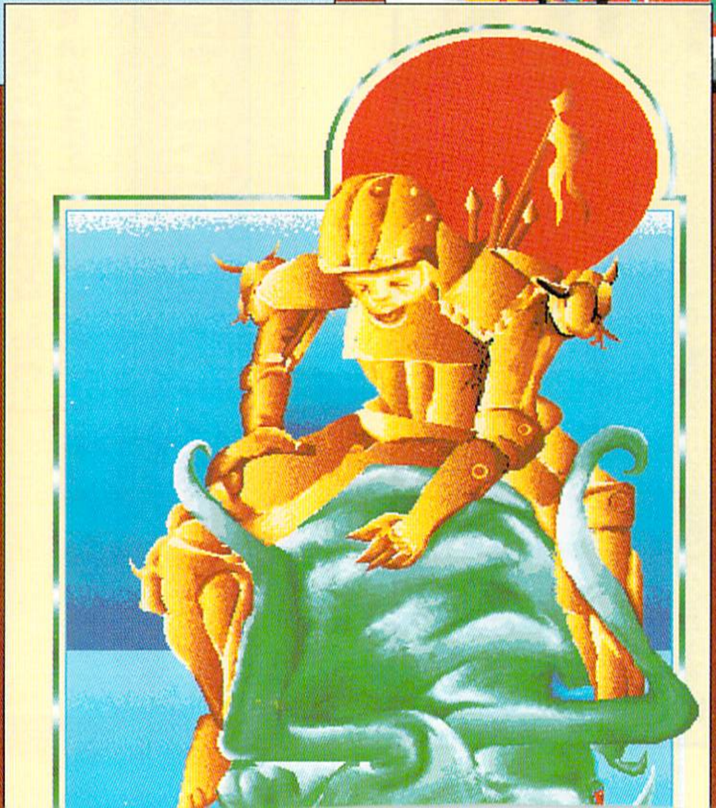


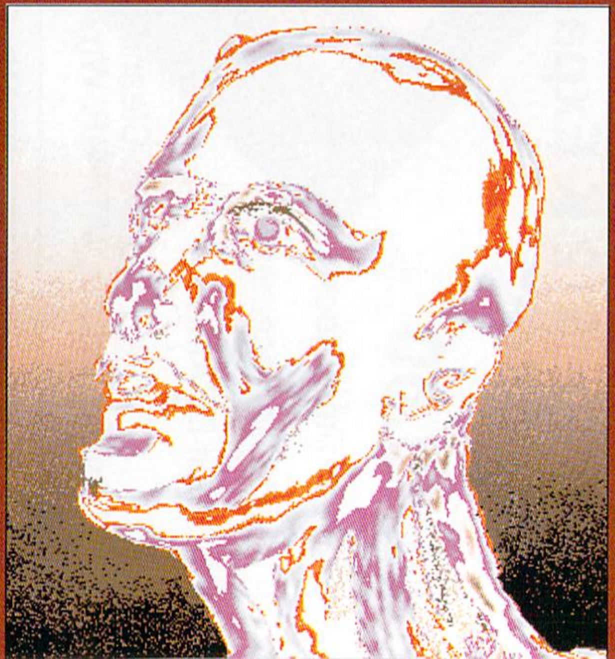
memory, and the students use them to produce work for public examination. The art room overlooks Alnwick Castle, which is featured in one of the pictures.

Obviously we aren't the only ones to appreciate Ian's work, for he is currently staging an exhibition of computer art in Alnwick. Hopefully negotiations with Commodore over sponsorship will be fruitful.











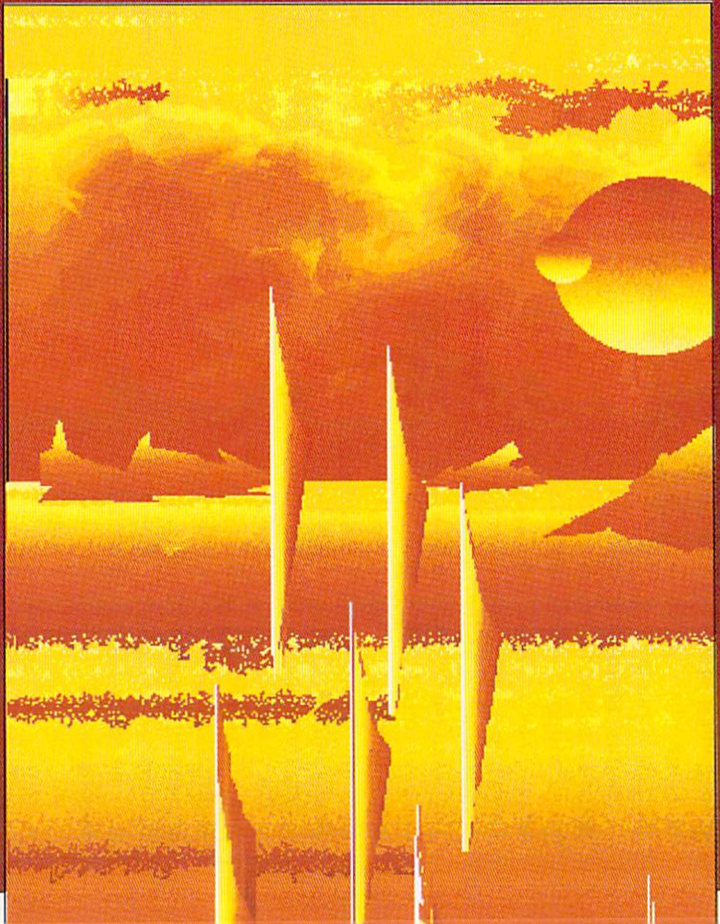






COMPANIES or individuals wishing to commission any of our Portfolio artists should in the first instance contact the Amiga Computing editorial offices. Tel 0625 878888, Fax 0625 879966.

Contributions, on disc please, to: Portfolio, Amiga Computing, Europa House, Adlington Park, Macclesfield, SK10 4NP.





All the king's men

Our own pawn star Alastair Scott checks out the new Pretender

IN October last year I called Chess Player 2150 "the best Amiga chess program", despite a few niggles – yet CP Software proved they listen to criticism by making the best even better, and calling it Chess Champion 2175.

After 10 years of micro chess programs, somebody has at last found the simplest and best way to move the pieces. "Fast Moves" and "Intuitive" are the phrases to note.

The first means that if you click a square attacked by one piece, the piece will immediately move to that square. The second results in the most likely piece being chosen to move to a square attacked by two or more pieces – this can easily be overridden.

The upshot is that you almost always need just one or two clicks on the same square to move a piece – no more clicking, dragging, wondering where the piece has gone and so on.

The pieces can also be forced to jump directly to the square chosen, eliminating that graceful but oh-so-slow sliding motion. If you are determined or stubborn, moves can now be entered straight from the keyboard.

OPENINGS were Chess Player 2150's weakest point, and Chess Champion 2175 remedies this in the most decisive manner. The opening library has been extended threefold to over 300,000 bytes.

Individual openings can be selected according to strength, popularity and name, and you can interrupt the computer's thoughts, forcing it to play the line you want. In addition, the computer "learns" any lines it has not previously encountered, storing them in a file, and you can type any openings you want it to know into another file.

This is done sensibly. There are no mysterious codes or dodgy text editors, the "user book" being a plain Ascii file in the format "e2e4 b7b6...", which can be edited with any PD text editor. This is the only opening library you can alter. In all cases the lines, as you would expect, are much deeper – I have seen several up to 25 (!) moves long.

These are the main changes. There are a host of minor ones, the most noticeable being that the main screen is green instead of blue – the graphics are exactly the same as those in Chess Player 2150 – and that the last few moves are displayed on the 2D board.

The menus are improved, with a less crowded layout and a few hot keys – for example, Amiga-I instead of the spacebar to bring up the information screen – making them look like Amiga menus. The right mouse button now brings the title bar up immediately, without the mouse pointer freezing then jerking all over the screen.

The Load Game option uses the latest ARP file requester and seems bombproof; Chess Player 2150 games are compatible but the opening libraries it has "learned" are not. Copies of the master disc now work properly, and I (fingers crossed) have yet to meet the Guru. There is now a hard disk installation option.

The most significant minor change is that a Preferences file can now be saved which contains the settings, position and size of the board, players' names, colours and so on – no more fiddling around with the menus before you start playing.

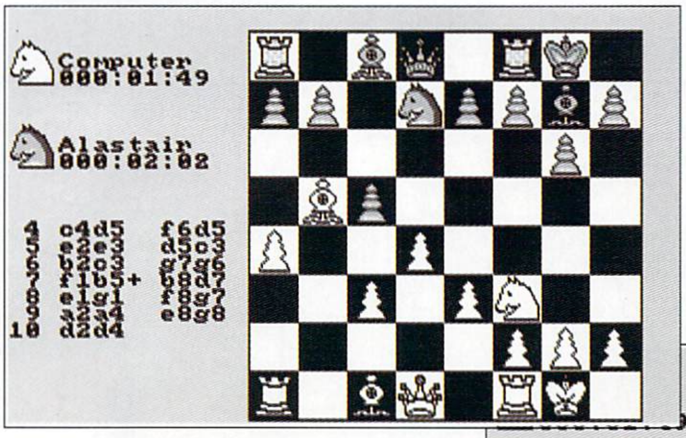
You don't get something for nothing, and something has been removed, namely the dreaded digitised speech – hardly a crippling loss! In fact, the only improvement I can think of that was not implemented was proper algebraic notation – the program still uses a four-character format as mentioned above. It's a pity the password protection scheme is still there because it's the only reason for hanging on to the manual, the program is easy enough to use without it.

YOU may think that these are cosmetic changes, and, with the exception of the opening library, you could well be right. However, CP has improved the playing strength, not by leaps and bounds, but by enough to make its presence felt.

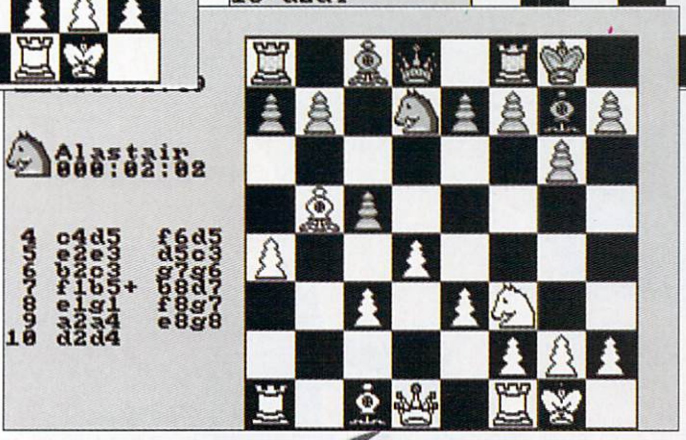
The program is slower in the opening, probably due to all the searching for opening library files, but is considerably faster in the middle and endgames.

The instructions say that the depth of

Supreme



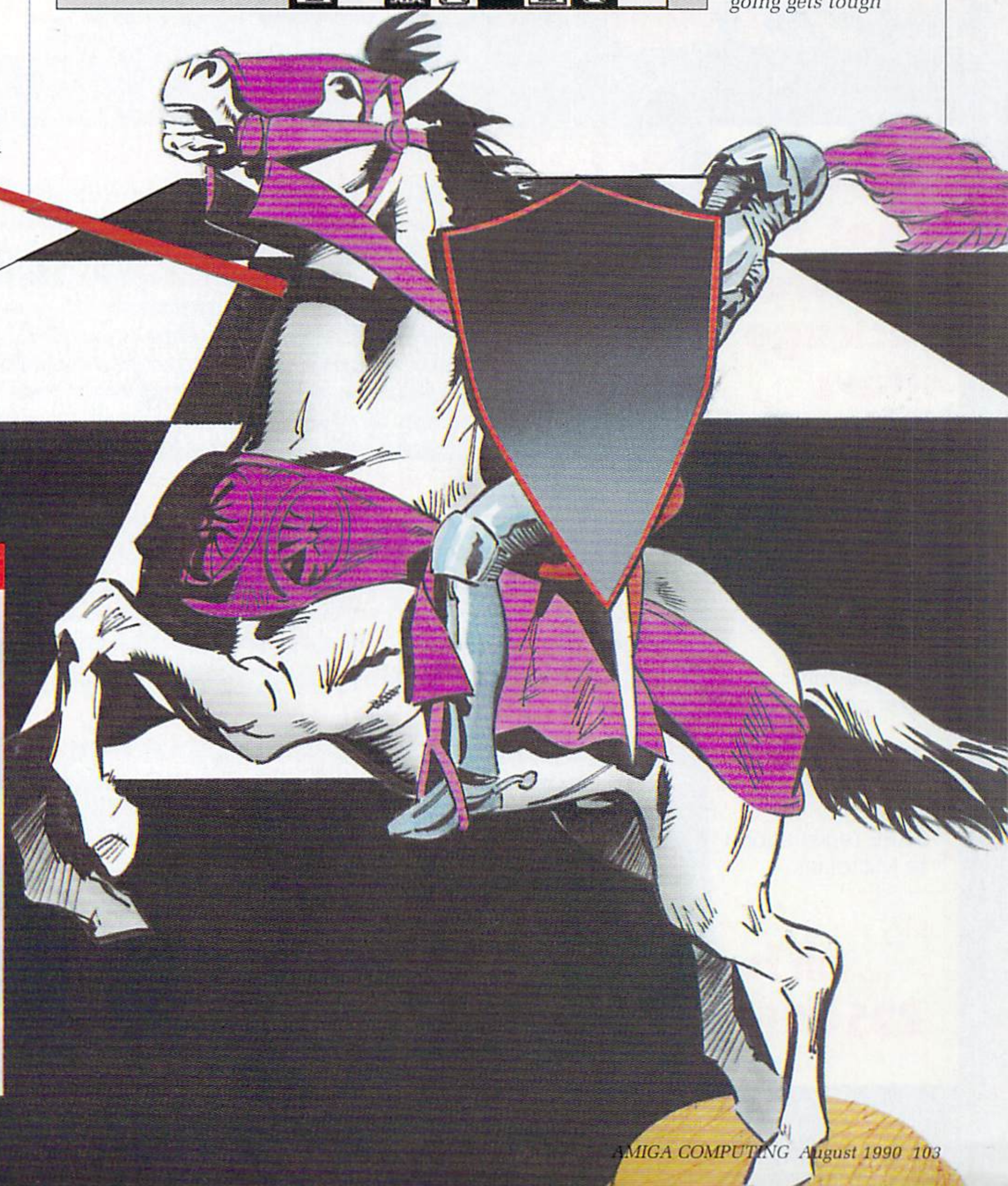




search and playing strength are improved even more if you have a megabyte of memory fitted, and I found that, on average, the program searched about one ply (half a move) deeper with the expansion memory available than with it switched off. As looking half a move further ahead could make or break a combination, this is not the trifling improvement it may seem.

If you already have Chess Player 2150, examine your wallet and your conscience carefully before upgrading to Chess Champion 2175 – unless you are a very good player, Chess Player 2150 will keep you entertained for years to come. Otherwise, look no further for the best Amiga chess program.

Playing the computer is no fun because you can't kick it in the shins under the table. However (as above) you can ask for help if the going gets tough



REPORT CARD

Chess Champion 2175
C.P. Software
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GRAPHICS.........
A little blocky, but still excellent.

PRESENTATION
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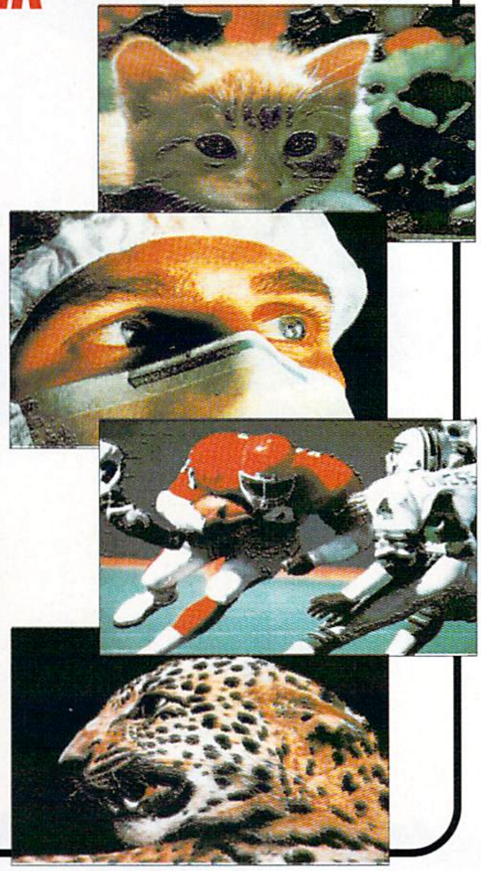
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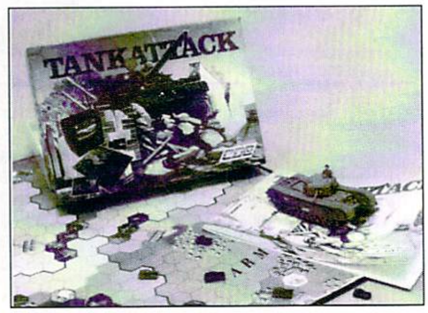
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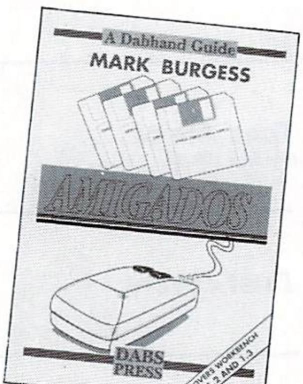
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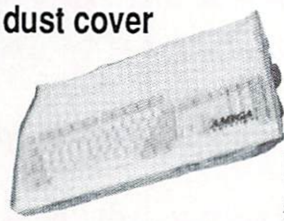
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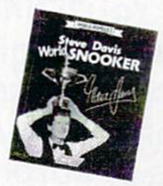
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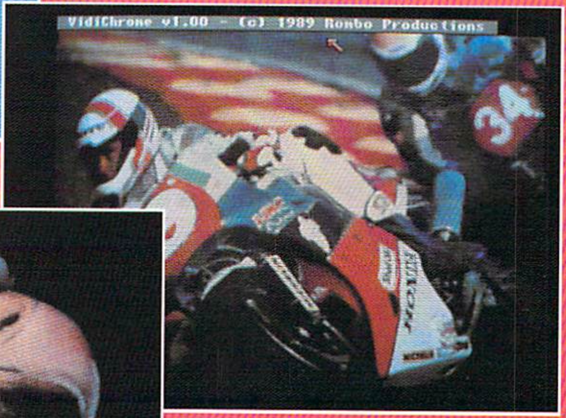
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